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fueloil & oil heat

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With Brodie Quantrol Meters...

Truck tank deliveries to fleet accounts are handled with greater speed, accuracy and efficiency through the use of Brodie Meters equipped with Brodimatic Quantrols. The exact gallonage of each delivery is automatically controlled by simply presetting the desired number of gallons to be discharged. When this quantity has passed through the Meter the Quantrol shuts off. Delivery totals are clearly registered on large legible direct-reading Brodimatic Counters. Never is there any question as to the amount of fuel the fleet operator receives. Savings in delivery time permit each tank truck and salesman to serve more customers. The avoidance of spillage, errors and losses contributes to lower costs and greater profits. Equip today with Brodie Metering Equipment. Write for full details.

BRODIE METERS

RALPH N. BRODIE CO., Inc., 953 61ST ST., OAKLAND 8, CALIF. • *Division Offices:* CHRYSLER BLDG., NEW YORK CITY 59 E. VAN BUREN, CHICAGO 5 • 302 SOUTH PEARL ST., DALLAS 1, TEXAS • 221 9TH AVE. NORTH, SEATTLE 9, WASH. 2101 S. SAN PEDRO, LOS ANGELES 11, CALIFORNIA • *REPRESENTATIVES AND STOCKS IN ALL PRINCIPAL CITIES*

VOL. 7, NO. 2

fueloil & oil heat

JUNE

1948

Names in the News

R. V. Clark, formerly district manager of the company's Dayton office, recently was named manager of heating control sales, Penn Electric Switch Co., Goshen, Ind. He will make his headquarters at the main office, responsible for sale of automatic heating controls. An association of twenty years with Penn has given him a wide and varied experience in the application of automatic heating controls. To succeed Mr. Clark at Dayton, *E. A. Price* has been designated district manager. He formerly managed the company's Dallas, Texas district, where he has been replaced by *James Stiver,* who recently joined Penn's sales organization.

Robert F. Krisinger, Des Moines, Ia., as factory field representative for Harvey-Whipple, Inc., Springfield, Mass., will cover the states of Iowa and Missouri. For the past nine years he has represented Green Colonial Furnace Co., in Iowa and is well-known to dealers in that state. His new assignment calls for him to contact outlets in his area for the line of Master Kraft conversion oilburners and oilburning boiler and furnace units.

J. Burton Edwards has joined C. P. Woodworth, Inc., Lawrence, Mass., as general manager. The firm distributes Jenney petroleum products in northeastern Massachusetts, and Mr. Edwards is planning installation of a heating and air conditioning department to supplement the firm's retail fueloil business. Mr. Edwards has owned and operated a fueloil and oilburner business in north-

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FRONT COVER: A scene at Shell's Wood River, Ill., refinery, where barge loads of fueloil, and other products, are shipped on the Mississippi to ports as far north as Minneapolis and St. Paul, on the Ohio River eastward to Pittsburgh and via the Illinois Barge Canal to the Great Lakes.

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The Unexcelled Thermostat for Even Room Temperature Control

THE MERCOID CORPORATION, 4201 BELMONT AVE., CHICAGO, ILL.

ern Connecticut for the past fifteen years and was vice president of Crown Petroleum Corp., Springfield, Mass., for two and a half years prior to the war.

Paul J. Fillmore has been named district manager, Heating and Appliance Div., Evans Products Co., Plymouth, Mich. His territory will include Michigan, Ohio, Kentucky, West Virginia and western Pennsylvania and he will maintain an office at Pleasant Ridge, Mich. Mr. Fillmore's efforts will be concentrated on sales and distribution of Evans oilfired space and water heaters and furnace units.

James H. Lahey has been named to direct sales of York-Heat automatic heating equipment in the middle western territory for York-Shipley, Inc., York, Pa. Mr. Lahey began his career in the heating industry in 1926 and joined Pressed Steel Tank Co., Milwaukee, in 1930 as director of on-the-job training. In 1940 he became director of war production training for the Bloomington, Ill., area. He joined Williams Oil-O-Matic as director of training in 1943 and was appointed administrator for engineer-science-management war training at the University of Illinois. After the war he directed Oil-O-Matic's sales and service training program.

Walter W. Lige now is functioning as manager of national accounts for Bell & Gossett Co., Morton Grove, Ill. He became associated with B & G in 1940 and for several years was in charge of the Cleveland office. Mr. Lige's duties will consist largely of maintaining close contact and servicing those organizations which distribute on a nation-wide basis the company's hot water heating specialties.

Once upon a time 25 WINTERS AGO . . .

History, they say, has a way of repeating itself. When you think of Ohio Motors, this saying is profitably true. A company that has built dependable motors—and more of them—for 25 winters is naturally building even better ones today. The letter reproduced below shows that specifying Ohio Motors assures *complete customer satisfaction.*

ELECTROL BURNER MANUFACTURING CO., INC.

Electrol Automatic Oil Heating & Air Conditioning Equipment

22 UNION AVENUE
RUTHERFORD, NEW JERSEY
TELEPHONE: RUTHERFORD 3-6300

May 6, 1948

The Ohio Electric Mfg. Co.
Cleveland 4, Ohio

Gentlemen:

We are sending you an interesting photograph of our Model S burner installed in a Seattle home in 1923. This burner used an Ohio motor and is still in operation today after 25 years of service.

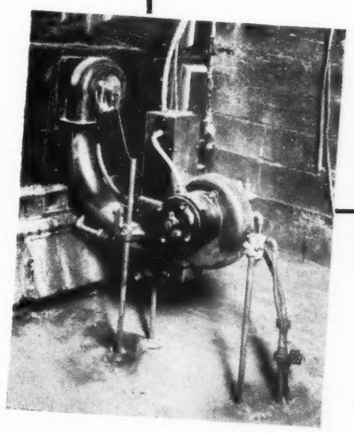
We made the Model S burner from 1922 to 1925. Our later burner was designated Model T and it used an identical Ohio motor. While few Model S burners are in operation today, thousands of the Model T are. Actually, our dealers have taken Ohio motors from the earlier Model S burners and installed them on the Model T burners. So there are hundreds of Ohio motors made in 1923 that are still giving perfect service.

These old Ohio motors never know when they're licked and just won't give up. We estimate that with twenty-five years of dependable service in back of them, after another fifteen years both motor and oil burner may be replaced. We can never be sure.

Very truly yours,
ELECTROL BURNER MANUFACTURING CO., INC.

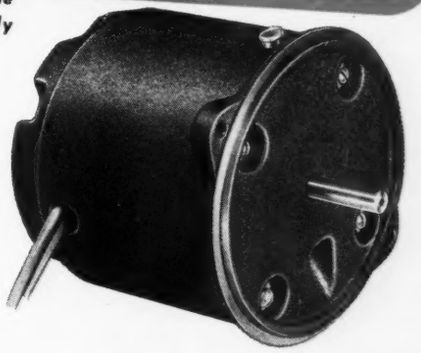
R. F. Andler
President

RFAndler:as
Enclosure



Ohio MOTORS

the motor customers write about—enthusiastically



THE OHIO ELECTRIC MFG. CO.
5913 Maurice Avenue • Cleveland 4, Ohio

fueloil & oil heat

Editorial Leaks

At the annual meeting of the Oil-Heat Institute at Chicago in early April, the outlook for oilheating business was decidedly bad, primarily because of so much unfavorable publicity on fueloil supply in the newspapers. In private conversations, some important oil men were saying that there would be plenty of oil next season to take care of all existing installations and a reasonable number of new ones, but they were particularly reluctant to make such statements publicly because they feared another year of unlimited installations without sufficient increase in oil supply to handle them.

In that atmosphere, the directors of OHI set aside a considerable sum of money to employ professional public relations counsel, selecting the firm of Casler, Hempstead and Hanford. Lon Casler, senior partner in this firm, has taken a personal interest in the project to the extent of giving it virtually all of his time during the past six weeks. In collaboration with W. A. Matheson, Chairman of OHI's Publicity and Legislation Committee, the oilheating industry's story has been brought to numerous meetings where top level oil industry policy was being influenced. As a result, there has been a very definite trend on the part of the oil industry, particularly its top men, in the direction of more conservative and optimistic statements on fueloil supply. It will take another month or two for these statements to be understood by the public, but most definitely, the trend has been reversed into the direction favorable to oilheating men, as well as the oilheating public. A number of individual commitments as to advertising and public relations policy have been given to Casler and Matheson by high officials in major oil companies. Included in the top-side groups addressed either formally or informally by Casler and Matheson have been such important organizations as the National Petroleum Council at Washington, the American Petroleum Institute at Atlantic City, and the Oil Industry Information Committee meeting at Dallas, May 13.

The primary result of these encounters has been the establishing of confidence among oil men that the oilheating industry is not out to cut the oil industry's throat or to throw it into government, but rather that the industry is composed of subsantial firms willing to help solve a problem that is proving difficult for both industries.

More detail on the work of Matheson and Casler will be released at a little later date, but at this time it is important for the industry to know that they are making excellent headway.

◈

Easing the no-more-oilburners view he took at the OHI convention at Chicago a month before, Dr. Robert E. Wilson told the API Division of Refining on May 12, that an increase in oil supply of about 5% expected this year should satisfy probable demand, "if new oilburner installations return to the relatively low prewar rate, and if consumers continue to cooperate in conservation of both gasoline and oil, and if we have a moderate winter, and if there are no serious strikes in our or other basic industries." Dr. Wilson, chairman of the board of Standard Oil Co. (Indiana), has been one of the chief proponents of seriously restricting oilburner sales until the petroleum industry can expand its production, refining and transportation facilities.

Though Dr. Wilson's most recent statement can hardly be interpreted as a reversal of his former stand, it indicates a retreat from the radical proposals of only a few weeks ago, and possibly a realization that the extremely pessimistic view of immediate oil supply is more damaging than the risk of selling a few more oilburners. His continuing fear of any appreciable volume of oilburner installations is revealed by the warning, "If I should prophesy that we will get by, and the public relying on such predictions should reduce its efforts to conserve oil and gasoline and step up its oilburner installations to even approach those of last year, we would undoubtedly have a shortage much worse than that of last year."

After the beating that Indiana Standard's recent publictiy has given the public and the oilheating industry, Dr. Wilson need have no fear of a runaway oilburner market. Two out of three who have considered installing oilheating equipment during the last year already have given up the idea. The oil shortage scare has been vastly overplayed as far as this industry is concerned, and a change in atmosphere is long overdue.

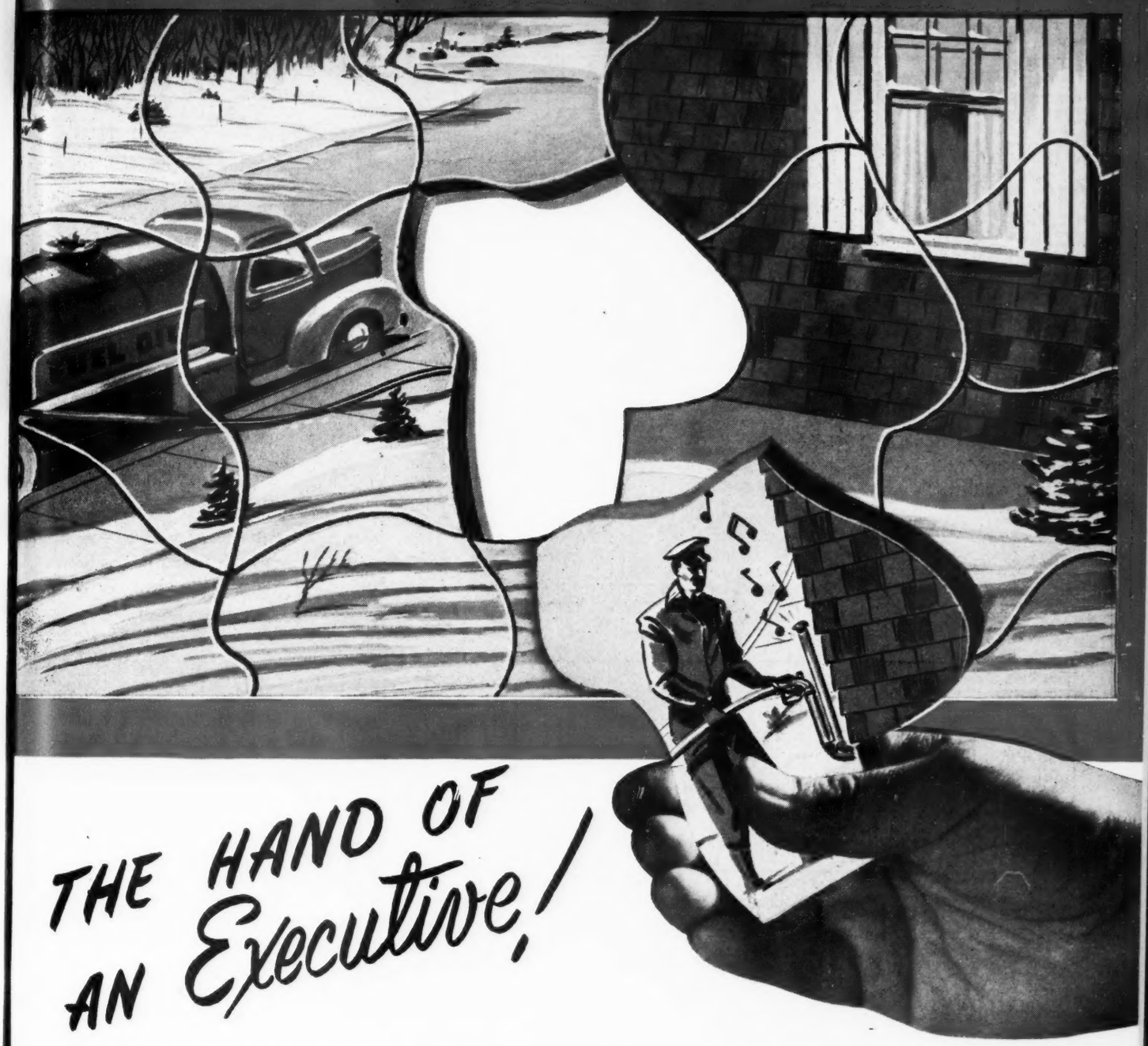
◈

Diesel powered locomotives are hauling many of the country's crack trains, and much of its freight. This use of oil is many times more efficient than burning it under the boilers of steam locomotives. It is cleaner, the railroads like diesels, and there is no probability that their use will decrease in the future.

The fact that diesel locomotives are competing with the oilheating industry for distillate oils has caused some strong feeling in the industry. It has been felt in the business that railroads should stop their dieselization programs, and the public supports this view when there is a necessity to allocate short oil supply. There is evidence that the program was slowed, either wilfully or from necessity, but this industry has nothing to fear from the diesel program for years to come.

Diesel locomotives have increased the demand for diesel fuel by more than 400% in recent years. This percentage is deceptive without looking at the actual gallonage involved.

Last year railroad diesels used 719 million gallons of oil for fuel. All distillate oilburners at the same time used more than 7 billion gallons, or about ten times the railroad diesel demand. In 1948 the anticipated increase for diesel locomotive needs will be about 200 million gallons, about 28% more than last year. The increased demand for all domestic oilburners will be at least 700 million gallons, or about 10% over 1947. Though diesels are growing faster than we are, it will be a long time before they catch up, or even become a serious threat to oilheating. We expect there will be plenty of oil for all uses long before then.



THE HAND OF AN Executive!

At the fingertips of the oil executive today are facts and figures indicating the importance of VENTALARM Signal in the promotion of efficient, automatic home fuel oil delivery. Analysis of such figures shows clearly VENTALARM fast-filling, non-spilling efficiency—discloses 20 to 30 per cent reduction in fuel delivery costs, maximum use of manpower and trucks, minimum waste of time, plus complete safety at the actual fill point.

More and more executives have noted these facts—and by their executive decision, VENTALARM Signal is now installed in over one million oil heated homes.

★ Equip your customers' tanks with VENTALARM.

★ *Your* executive decision now will greatly increase your profits

★ Purchase VENTALARM from your supply house or write us for complete information.

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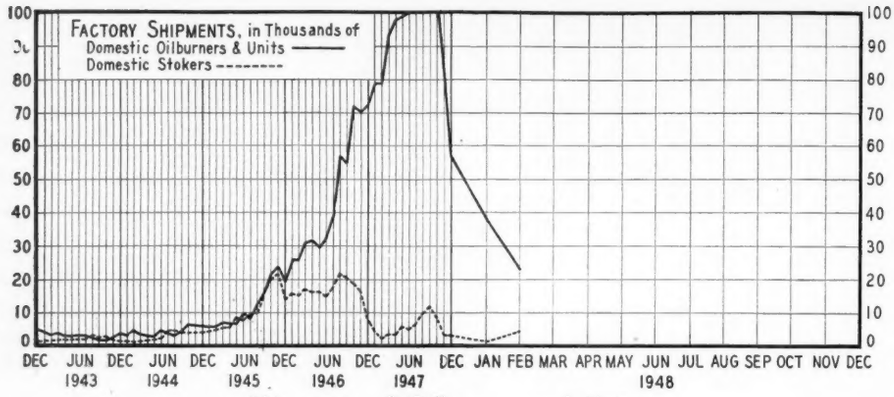
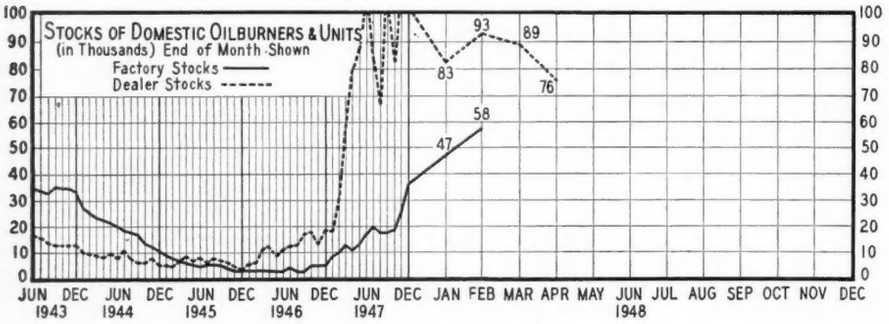

FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
Domestic Stokers
DEC JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1943 1944 1945 1946 1947 1948

Shipments of Oilburners and Units

(Including Exports)

Adjusted to include manufacturers other than the 162 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	MARCH			THREE MONTHS		
	1948	*1947*	*Percent Change*	*1948*	*1947*	*Percent Change*
Conversion	11,974	76,446	— 84.3	53,544	207,530	— 74.2
Boiler units	1,561	3,049	— 48.8	5,886	9,904	— 40.6
Furnace units	3,261	16,363	— 80.1	18,433	38,160	— 51.7
All domestic	16,796	95,858	— 82.5	77,863	255,594	— 69.5
Commercial	2,448	4,836	— 49.4	7,805	14,165	— 44.9
Total	19,244	100,694	— 80.9	85,668	269,759	— 68.3

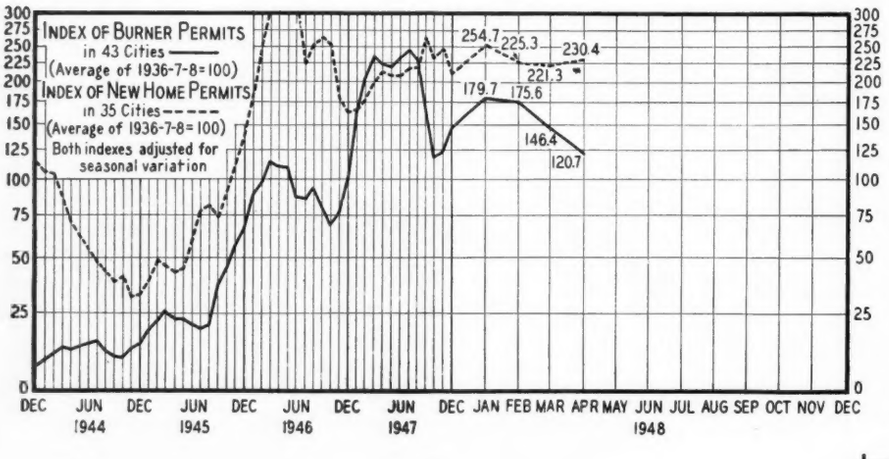

STOCKS OF DOMESTIC OILBURNERS & UNITS
(in Thousands) End of Month Shown
Factory Stocks
Dealer Stocks
93
89
83
76
58
47
JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1943 1944 1945 1946 1947 1948

April Minimum Retail Prices: Key Dealers

	CONVERSION BURNERS	BOILER-BURNERS	FURNACE-BURNERS
Highest	$450	$1130	$1250
Lowest	235	400	450
Apr. Aver.	352	718	637
Mar. Aver.	351	703	620

Price Index: Conversion Burners: January 1940 is 100%

WHOLESALE				RETAIL			
April	153.5	Six months ago	141.5	April	149.8	Six months ago	145.6
March	150.6	Year ago	159.1	March	149.4	Year ago	145.7



Oilheating Trends

PRELIMINARY ESTIMATES of April installations of domestic oilburners and units were 16,910, or slightly above the number installed in March, and 42% below the 28,994 installed in April of 1947. April installations are divided: Replacements 5,496, or 32.5%; New Homes 4,414, or 26.1%; and Conversions from other fuels, 7,000 or 41.4%.

Before stating the total figures for the first four months, it should be noted that the installation estimates for the first quarter of the year have been revised slightly downward, becoming 76,851, instead of the originally stated 77,444. This change was made as the result of a very large study recently completed, to determine just where the burners were installed by states. It is planned to issue each quarter a state breakdown of installations and at the times when these appear there will be some minor adjustment in the individual monthly figures previously given. The reason for this is that the quarterly study to determine the state breakdown is a much larger effort, hence more nearly accurate.

The table showing installations by states appears in another part of this issue. Particularly significant in that table is that it substantially changes the ratios of replacements to new home sales and conversions from other fuels, while not importantly changing the overall total. It is apparent from this that the regular monthly reporting group is weighted somewhat in the direction of the more alert dealers, those having sales forces that have been out after replacement orders. Using the new totals for the first three months as shown on the large state table and adding the preliminary figures for April as previously stated, we find that for the first four months, the estimate of total installations is 93,761, which is divided: Replacements 32,299, or 34%; New Homes 34,166, or 36%; Conversions from other fuels 27,296, or 30%. The four months' total installations of 93,761 is 46% below the same period in 1947 when 172,547 were installed.

BURNER STOCKS: Stocks of domestic oilburners and units in dealer hands on April 30 are estimated at 76,174. Factory stocks on March 31, latest available data, were 67,263.

PUBLIC ATTITUDE: Lack of confidence in next season's oil supply on the part of the public, as indicated by the public opinion survey reported in the May issue of FUELOIL & OIL HEAT, is definitely holding back replacement sales. This is the opinion of 79% of all dealers reporting this month. These dealers express the belief that replacement sales would be at least 75% higher if the general public could be reassured that there will be enough oil next winter.

NEW HOME FUELS: Dealers were asked this month to estimate the percentages of new homes in their communities that will install equipment in 1948 for the three principal types of fuels. Embracing all sections of the country, the estimates indicate that 48% of new homes this year will be oilheated, 27% gas heated, and 25% coal heated. Two years ago the housing agencies in Government disclosed that during 1946 new homes were heated in this ratio: Oil 21%; Gas 52%; Coal 27%. Thus, in the two years there has been relatively little change in the coal percentage, while oil and gas would appear to have about exchanged positions. All government records indicate that just about one-third of new homes do not have central heating plants—they are heated with space heaters, floor furnaces, or wall furnaces. If we assume, then, that there will be built this year 900,000 new homes, about 600,000 of these will have central heating plants, and if oilburners go into 48% of those, as the dealers expect, the number will be 288,000.

NEW HOME FUELS
Dealer Estimates for 1948

	Oil	*Gas*	*Coal*
New England	74%	12%	14%
Mid-Atlantic	40	42	18
Midwest	29	26	45
Pacific Northwest	79	..	21
Total U. S.	48	27	25

There are important geographic variations between the fuel preferences. It is significant to notice in the table that the per cent of gas heated homes is expected to be higher in the Mid-Atlantic areas than in the Midwest. Builders are definitely using more coal installations this year than they did in 1947, although this cannot for very long retard the installations of automatic heating. This temporary shift toward coal is most pronounced in the Midwest, least in the Pacific Northwest. Countrywide, 31% of the reporting dealers say that builders in their towns are putting in more coal jobs this year than last year.

Oilburner* and Building Permits

OILBURNERS April 1948	OILBURNERS April 1947	OILBURNERS 4 MONTHS 1948	OILBURNERS 4 MONTHS 1947		DWELLINGS April 1948	DWELLINGS April 1947	DWELLINGS 4 MONTHS 1948	DWELLINGS 4 MONTHS 1947
16	1657	388	3425	Baltimore, Md.	746	341	1401	753
..	..	..	..	Binghamton, N. Y.	9	13	15	24
..	248	..	..	Boston, Mass.	54	20	113	67
40	97	223	372	Bridgeport, Conn.	..	..	..	..
..	..	..	..	Buffalo, N. Y.	33	24	85	50
..	..	..	..	Des Moines, Iowa	123	83	286	212
..	526	..	1693	Detroit, Mich.	813	989	2763	2963
26	41	204	108	Elizabeth, N. J.	2	48	2	50
13	28	46	106	Freeport, N. Y.	..	..	..	..
..	..	..	..	Greenwich, Conn.	25	27	64	67
..	..	..	..	Hackensack, N. J.	8	8	17	14
..	65	..	573	Hartford, Conn.	..	..	..	..
10	44	25	112	Irvington, N. J.	7	2	11	9
..	..	..	..	Lynn, Mass.	18	10	34	26
12	14	94	85	Meriden, Conn.	..	..	..	..
126	239	484	652	Milwaukee, Wisc.	189	113	457	276
..	120	..	491	Minneapolis, Minn.	..	125	..	231
32	33	69	88	Montclair, N. J.	..	..	..	..
18	42	46	106	Mt. Vernon, N. Y.	..	..	..	..
47	35	231	233	New Bedford, Mass.	..	..	..	..
25	33	82	191	New Haven, Conn.	..	..	..	..
0	0	0	0	New Orleans, La.	..	..	..	..
5	21	39	90	New Rochelle, N. Y.	20	4	33	18
..	4902	..	17,951	New York City (total)	..	..	..	..
..	4108	..	14,905	Brooklyn-Queens	..	..	..	..
265	794	1336	3046	Manhattan, Bronx, Rchd	..	..	..	..
136	70	404	369	Norfolk, Va.	84	24	208	107
1	0	4	7	Oakland, Calif.	..	..	..	..
22	109	394	343	Omaha, Neb.	98	75	..	186
11	22	34	48	Orange, N. J.	4	1	6	2
16	23	53	..	Passaic, N. J.	..	..	..	..
44	98	84	218	Paterson, N. J.	19	5	46	8
238	766	1123	2482	Philadelphia, Pa.	..	..	..	..
..	..	..	..	Plainfield, N. J.	16	41	27	81
28	80	74	296	Portland, Me.	19	7	46	14
524	711	1786	2298	Portland, Ore.	204	93	652	501
7	15	46	72	Poughkeepsie, N. Y.	..	..	..	..
30	115	131	411	Providence, R. I.	23	11	44	34
..	..	..	..	Reading, Pa.	5	2	10	6
67	67	273	166	Richmond, Va.	81	50	444	186
56	266	294	582	Rochester, N. Y.	..	..	..	..
21	20	71	65	Rockville Center, N. Y.	7	20	39	43
15	22	55	106	Salem, Mass.	8	6	18	10
117	149	372	521	St. Louis, Mo.	33	38	110	102
111	236	432	740	St. Paul, Minn.	117	110	252	153
..	123	..	342	Schenectady, N. Y.	..	..	..	..
..	..	..	..	Seattle, Wash.	198	220	749	710
..	..	..	..	Springfield, Mass.	108	43	177	90
25	34	166	109	Stamford, Conn.	..	..	..	..
..	..	..	..	Syracuse, N. Y.	..	28	..	50
..	..	..	..	Trenton, N. J.	7	39	9	43
..	..	..	..	Utica, N. Y.	12	9	23	11
77	215	369	882	Washington, D. C.	..	..	..	..
..	..	..	..	West Orange, N. J.	27	12	50	21
20	14	59	62	White Plains, N. Y.	14	4	34	10
72	139	235	297	Wilmington, Del.	32	20	37	33
79	179	295	494	Worcester, Mass.	..	..	..	..
1	36	81	132	Yonkers, N. Y.	..	..	..	..
2353	6464	10,049	19,314	*Totals*	3163	2513	8262	6694
—63.6		—48.0		*Percent Change*	+25.9		+23.4	

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

DEALER OUTLOOK: Dealers throughout the country at the end of April were of the opinion that their total 1948 sales would be about 46% below those of 1947. This showed a drop of four points in dealer confidence during the month, since the same group at the end of March reported that they expected business to be 42% below last year. There are indications that April represents the low point in the confidence for both dealers and oilheating consumers or prospects. There were some geographic variations in the degree of confidence expressed by dealers. In New England they expect business to be off only 32%, in the Middle Atlantic states off 57%, in the Midwest off 52%, and on the Pacific Coast off 15%. If business for the year actually turns out to 46% below last year, we would have a total of about 480,000

(*Continued on page 109*)

BOILER UNITS
•
AIR CONDITIONING
FURNACE UNITS
•
Dealer Franchises Open
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Fueloil Supplies

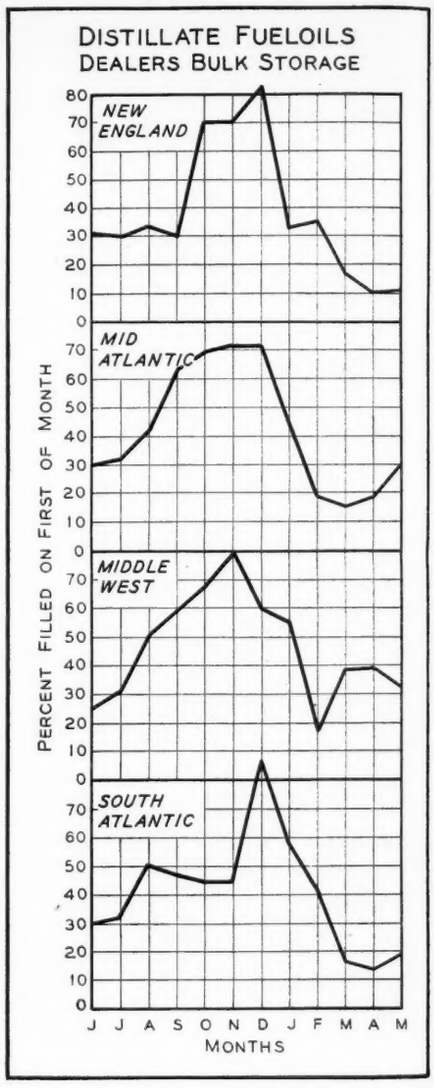
LOCAL FUELOIL distributors had on hand on May 1 distillate stocks equal to 26% of their storage capacity. This compares with 21% on April 1, and with 18% on May 1 a year ago. Kerosene stocks on May 1 stood at 30% of dealer storage capacity, compared with 29% on April 1, and with 28% on May 1, 1946.

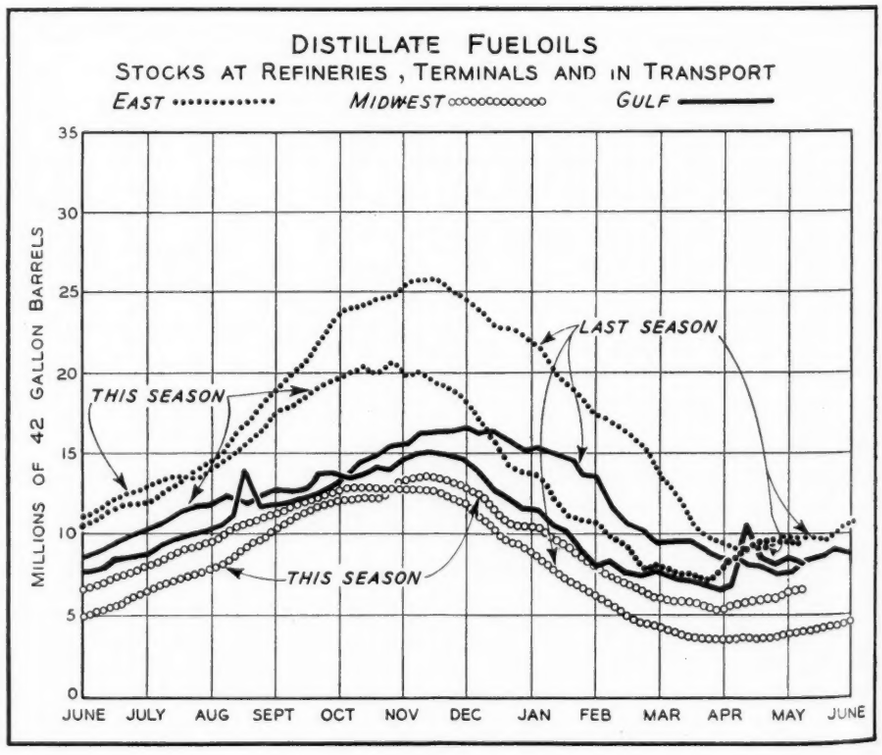
DEALER STOCKS

(Thousands of Barrels)

	No. 2 or 3 Distillates	*No. 1, Range, Kerosene*
East Coast		
5-1-48	3,507	800
5-1-47	3,202	1,219
Midwest		
5-1-48	1,024	727
5-1-47	709	678
East of Rockies		
5-1-48	4,531	1,527
5-1-47	3,911	1,897
Percent Change	+15.9	—19.5

Distillate stocks at refineries, in primary storage or in transit on May 8, the latest available data, were 24,357,000 bbls. in the area east of the Rockies, compared with 22,253,000 bbls. for the corresponding week of the previous year, a rise of 2,104,000 bbls., or 9%.


DISTILLATE FUELOILS
DEALERS BULK STORAGE
NEW ENGLAND
MID ATLANTIC
MIDDLE WEST
SOUTH ATLANTIC
PERCENT FILLED ON FIRST OF MONTH
0 10 20 30 40 50 60 70 80
J J A S O N D J F M A M
MONTHS


DISTILLATE FUELOILS
STOCKS AT REFINERIES, TERMINALS AND IN TRANSPORT
EAST
MIDWEST
GULF
MILLIONS OF 42 GALLON BARRELS
0 5 10 15 20 25 30 35
LAST SEASON
THIS SEASON
THIS SEASON
JUNE JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY JUNE

Confidence Most Needed

Outlook Considerably Improved; Now To Make Folks Believe It

by
Robert Gray

DURING THE PAST SIX weeks no fewer than a dozen important officials of major oil companies have made optimistic statements about the fueloil supply for next season. These statements were made in industry meetings, speaking either to fueloil distributors or petroleum jobbers generally.

The statements, in effect said, that the oil industry now believes there will be enough heating oil next winter to take care of all existing installations and allow for an increase in number of burners stated in various percentages from five to twelve.

These prominent industry spokesmen included such men as Eugene Holman, J. L. Minner, Dr. R. E. Wilson, Howard E. Page, Jack Rathbone, L. B. Fox, Gordon Donald, and the Standard of New Jersey's publication, "The Lamp." None of these speakers failed to mention, however, that not all parts of the country and not all individual refiners could share fully in these increases, but rather that the figures referred to the country and the industry as a whole. These statements, decidedly more favorable than had been the oil industry's practice only a few weeks earlier, were the result of a discovery that general petroleum demands were not running quite as high as expected, while overall production was running a little higher.

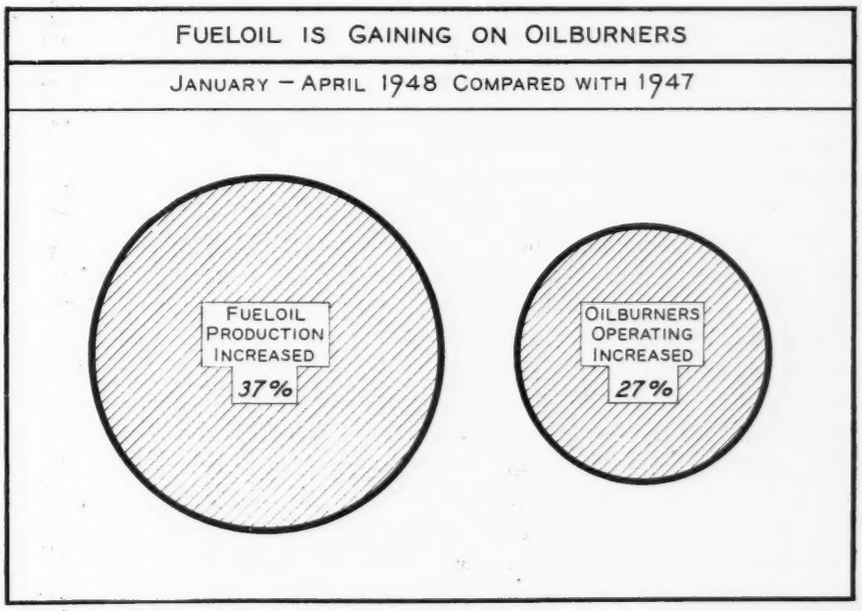
Also, the top-side of the oil industry had been told on several occasions since the annual meeting of the Oil-Heat Institute at Chicago in early April that the oilburner industry was suffering considerably from the bad publicity on fueloil shortage, and that it was willing to try and work out a cooperative, middle-of-the-road plan with the oil industry.

Not only have these spokesmen pointed the way to reasonable increases in the number of burners operating, but also other recent statistics have pointed in the right direction. For example, during the first week of May, the Interstate Oil Compact Commission held its quarterly meeting in Chicago, and at that time its Economic Advisory Committee outlined its estimates of demands for all products for the twelve-month period running from April 1, 1948 to March 31, 1949. For all practical purposes, this period embraces the stock buildup and peak-consuming months of next heating season, so the fueloil figures are particularly significant.

The Council estimated that the demand for distillate fueloil in that twelve-month period would average 1,070,000 Bbls. per day, compared with 946,000 Bbls. per day in the preceding twelve months, showing a rise of 13.1%. Obviously, some of this rise will have to go to improving stock levels to avoid the spot shortages of last winter, but most of it will be available to take care of new oilburner customers.

Thus, it becomes quite apparent that a moderate expansion in demand is not only possible, but is desirable to the oil industry. With the present high levels of production and refinery output, should it happen that the distillate fueloil demand does not go up as projected, there is strong probability that the surplus would be cracked into more gasoline, softening that market.

Confidence needs to be strengthened at three points. Some refiners are still worried and inclined to drag their feet. A majority of oilheating dealers, particularly the smaller ones, are so dis-



Increases in Distillate Production and Burners Operating

	Distillate Production (Thousands of Barrels)			*Average Number Burners in Use*		
	1947	*1948*	*Rise*	*1947*	*1948*	*Rise*
January	24,106	33,462	39%	2,848,639	3,662,861	29%
February	22,523	32,785	46	2,898,379	3,682,660	29
March	25,669	33,504	31	2,937,883	3,695,346	26
April	22,994	30,736	34	2,968,782	3,706,276	25
Average for period	23,823	32,622	37	2,913,421	3,686,786	27

couraged that they are making little or no effort to sell burners. Most important of all, however, is the public attitude, with the large majority of persons believing that the fueloil shortage will be with us again next winter.

Informed individuals in the oil industry know that the chance of any future fueloil shortage is exceedingly remote, if for no other reason than that the oil industry knows that it will be in worse trouble with government should another one occur.

Perhaps the public will begin to feel better about fueloil as we get further away from the troubles of last winter, and newspapers cut out the scare headlines. It is not reasonable to expect that the newspapers will help us a great deal to spread optimism, because that conflicts with their idea of what is news. There is little drama in saying that we have plenty of fueloil, because our country has always had plenty up until this winter. On the other hand, when the newspapers could say that we did not have enough fueloil that was a situation so different that it was shouted from the housetops.

Restoring public confidence, then, will have to be done largely by fueloil men and oilheating dealers in their individual communities. Salesmen for the more alert dealers will be carrying clippings of statements by oil industry leaders, showing that more burners can be put in. A number of large dealers in eastern states are advertising that they will guarantee fueloil supply next winter on the new burners that they install.

It has been rather noticeable in the monthly reports that come in to FUEL-OIL & OIL HEAT from dealers for the "Oilheating Trends" section, that some of the larger dealers with reputations for aggressive merchandising methods started in April to get rather substantial volume in new burner sales. Of course April as a whole was only slightly better than in March, but there are indications that it marked the turning point toward general improvement.

It is interesting to see, in the accompanying chart, the extent to which fueloil supply is gaining over oilburner demand. In the first four months of 1948, the output from refineries of distillate fuel was more than thirty-five million barrels above the 1947 similar period. The average rise in distillate production for the four months was 37% over the year before, while the average rise in the number of oilburners operating was only 27%.

Naturally, some of this fueloil improvement has gone to fill thirsty tanks, and to improve the picture generally, yet it is quite obvious from the chart and the table under it that things are rapidly getting better.

The large table shows where the burners were installed during the first quarter of this year. To the very large number of dealers who cooperated to make this information available, the editors and the industry, as a whole, are particularly thankful. Several hundred copies have been distributed to large oil suppliers, to help in their fueloil distribution. Notice that the installations for each state are divided into three parts: (1) the replacement of old oilburners; (2) installations in new homes; and (3) conversions to oil from other fuels.

The net additions to new oil users during the three-month period represented a gain in fueloil demand for next season of only 1.4%. Similar studies are planned for subsequent 1948 quarters.

Distillate Oilburner Installations
By States
First Quarter of 1948

	Burners In Use 1/1/48	INSTALLATIONS 1/1/48 TO 3/31/48 Replacements	New Homes	Conversions	Total New Oil Users	Burners In Use 3/31/48
Maine	48,713	483	332	663	995	49,708
New Hampshire	39,015	376	596	841	1,437	40,452
Vermont	12,732	88	25	88	113	12,845
Massachusetts	352,160	3,116	2,380	2,112	4,492	356,652
Rhode Island	47,886	256	324	255	579	48,465
Connecticut	161,607	968	1,224	990	2,214	163,821
TOTAL NEW ENGLAND	662,113	5,287	4,881	4,949	9,830	671,943
New York	667,208	7,446	2,747	3,802	6,549	673,757
New Jersey	332,686	2,078	1,126	906	2,032	334,718
Pennsylvania	286,939	1,772	1,250	1,805	3,055	289,994
Delaware	22,306	92	181	101	282	22,588
Maryland	166,777	542	838	240	1,078	167,855
District of Columbia	48,509	337	122	74	196	48,705
TOTAL MID-ATLANTIC	1,524,425	12,267	6,264	6,928	13,192	1,537,617
Virginia	90,797	470	1,170	619	1,789	92,586
West Virginia	445	23	..	9	9	454
North Carolina	34,445	86	564	302	866	35,311
South Carolina	11,336	210	467	316	783	12,119
Georgia	7,923	11	81	40	121	8,044
Florida	33,112	320	696	209	905	34,017
TOTAL SOUTH ATLANTIC	178,058	1,120	2,978	1,495	4,473	182,531
Michigan	134,312	1,156	4,062	555	4,617	138,929
Ohio	47,332	217	375	372	747	48,079
Indiana	42,441	270	818	242	1,060	43,501
Illinois	144,369	995	2,417	588	3,005	147,374
Wisconsin	100,759	696	648	508	1,156	101,915
Minnesota	137,673	856	1,126	431	1,557	139,230
Iowa	48,960	353	402	440	842	49,802
Missouri	57,810	248	345	335	680	58,490
Kansas	6,093	76	78	82	160	6,253
Nebraska	32,718	195	285	137	422	33,140
South Dakota	17,734	290	101	278	379	18,113
North Dakota	14,396	82	171	358	529	14,925
TOTAL MIDWEST	784,597	5,434	10,828	4,326	15,154	799,751
Kentucky	4,411	30	73	27	100	4,511
Tennessee	8,260	55	135	51	186	8,446
Alabama	6,042	40	99	37	136	6,178
Mississippi	1,037	7	17	6	23	1,060
Arkansas	1,836	13	30	10	40	1,876
Louisiana	8,655	58	142	53	195	8,850
Oklahoma	1,214	8	20	8	28	1,242
Texas	24,401	164	398	150	548	24,949
TOTAL SOUTH CENTRAL	55,856	375	914	342	1,256	57,112
EIGHT MOUNTAIN STATES	55,670	651	325	307	632	56,302
Washington	131,696	580	962	633	1,595	133,291
Oregon	77,288	1,089	1,713	1,235	2,948	80,236
California	180,817	591	887	81	968	181,785
TOTAL PACIFIC	389,801	1,669	3,562	1,949	5,511	395,312
TOTAL U. S.	3,650,520	26,803	29,752	20,296	50,048	3,700,568

Materials Shortages Threaten Industry's Expected Volume

SINCE THE FIRST OF THE YEAR most of us have been so busy following the probable supply of fueloil in the heating season ahead, we have been only partly conscious of the growing shortages in other materials necessary to a healthy business volume this year. It has been calculated that the increased supply of fueloil, the saving in customer conservation, replacement and modernization, and the likelihood of a milder winter ahead should make possible 450,000 new domestic oilburner installations, and sufficient effort on the part of dealers would sell another 150,000 burners for replacement. This gives us an outside figure of 600,000 domestic burners for the year, or little less than twice the best prewar year.

Unfortunately, this theoretical figure is not an accomplished fact. The demand is not automatic, in spite of the assumption of some oil company officials that there is danger of selling too many burners this year. Chief consideration has been given to ways and means of putting brakes on oilburner sales in most published statements. Manufacturers and dealers have fallen to arguing about the top possible figure, and neglecting the day to day task of building up a total that would come close to it.

Now there are signs of shortages to come that may put consideration of oil supply in the background. Steel, cast iron, aluminum and copper may become as short as they were little more than a year ago. Our government is committed to a program that will enlarge the Navy, re-equip the Army, build a new Air Force, and supply essential European needs while the domestic demand for consumer goods remains at a record high. Complicating this problem is the threat of another coal strike within the next few weeks, following a recent shutdown of nearly a month which also cut steel production. Though there is not yet a shortage of oilheating materials, with the possible exception of pipe, the demands in sight for raw materials are greater than the probable supply. Shortages can develop rapidly.

Six months ago the principal producers of aluminum were working with oilheating men to develop an aluminum oil storage tank that would satisfy safety requirements. Though the aluminum industry undoubtedly is still interested in the use of aluminum for oil tanks, the supply of metal is short. It is reported that low water has cut the generating capacity of hydroelectric stations so much that aluminum plants can operate only at partial capacity. Against this, the demand for aluminum sheet for aircraft production is rising. Some manufacturers are having difficulty finding the aluminum they need for castings, and expect the supply to get shorter.

Iron Pipe Now Scarce

Iron pipe for fill and vent lines has been short in most areas for some time, and the expectation is that with any increase in demand, dealers will have increasing difficulty in finding enough for their new installations. Most installers now are buying for each individual installation, with little hope that they can stock any quantity of pipe. Increased industrial activity and plant modernization, a record high level of building, and the pressure on total iron supply offer little hope that the pipe supply will get easier.

Steel tanks and steel boilers at present are in good supply. Many manufacturers report large stocks on hand, but production has been stopped in some of the plants and no steel is on order for future production. Present allotments of steel for warm air furnaces, according to the National Warm Air Heating & Air Conditioning Association, will supply only three-quarters of the furnaces required this year. Tanks currently are not too hard to find, but like steel boilers, there are fewer being made than are being used, and the industry is coming into the heavy sales and installation season without an adequate supply in sight.

One copper company is reported to be slow in shipping tubing at present. With greater demand immediately ahead it is probable that shipments will be slower as orders increase. Wire is not yet reported scarce, but there is a better than even chance that magnet wire demand will increase at least as fast as other forms of copper in any rearming program. Motors and transformers may be hard to get before this year is ended. Manufacturers as well as dealers will do well to check their stocks and their suppliers. Orders probably will be filled in the order in which they are received, barring some rationing or allocation program, and such a program is getting some attention in Washington.

Though dealers and manufacturers may not be busy at present, few are planning to go out of business in the immediate future. If they are to avoid serious trouble they should examine closely their supply picture for the remainder of the year, and not lean too heavily on glib assurances from manufacturers who may at present be well stocked.

The oil supply problem is likely to diminish in importance. The public will be hearing less pessimism, and the farther we get from the publicity of last winter, the fewer will be influenced by it. In view of the possible supply of other materials, it is doubtful if any oilburners installed this year will go without oil next winter. The problem may be, rather, to get enough installations made to satisfy the public and the industry. It is time to start selling—hard selling—right now.

A survey recently completed for FUELOIL & OIL HEAT shows that two out of three prospects who have considered burning oil during the last year now have given up the idea. Dealers report that they find resistance to modernization of oilfired heating plants, and particularly to installing units that cannot be easily converted to other fuels. Though this resistance is no doubt the result of unfavorable oil publicity, there is no reason to believe that a change in the publicity atmosphere will immediately restore the demand. It might help, but there still is a lot of selling that must be done to get the expected volume this year.

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Clyde T. Foster, vice president, Standard Oil Co. (Ohio), has been elected executive vice president of the company.

Oilfired Unit Heaters

Save Floor Space and Fuel Costs on Right Applications

by
Max Seltzer*

This article reveals a new field of opportunity for the live wire oilheating contractor—the oilfired unit heater. This piece of equipment yields a real profit to the dealer in its highly specialized field. In particular it affords many advantages to the ultimate user—(1) the elimination of boiler room, radiators and piping, and (2) its high operating efficiency.

Max Seltzer

THE OILFIRED UNIT heater is really a warm air furnace, rather than a unit heater. It is usually suspended from the ceiling of the space that is to be heated. The flue gases pass from the oilfired combustion chamber through a heat exchanger and then to the chimney. Air is drawn from the building by means of a blower, forced between the heat exchanger and the outside shell or jacket, and then discharged back into the building.

Usually the burner (since it is attached to the furnace suspended to the ceiling) is ten to twenty feet above the oil tank. It is therefore necessary to use a two-stage pump unit and a two-pipe hook up with an absolutely tight oil line containing a vertical check. If the lift is over twenty-five feet an auxiliary pump must be used.

The flue can be connected to the conventional chimney or, if there is none, the smoke pipe can be run through the roof or the side of the building.

Where It Is Used

The oilfired hanging unit is used where space is at a premium since it eliminates the need of a boiler room, radiators and pipes.

Many a warehouse, garage, store and building structure can save the expense of constructing a boiler room and use the space usually devoted to that purpose for more profitable ends.

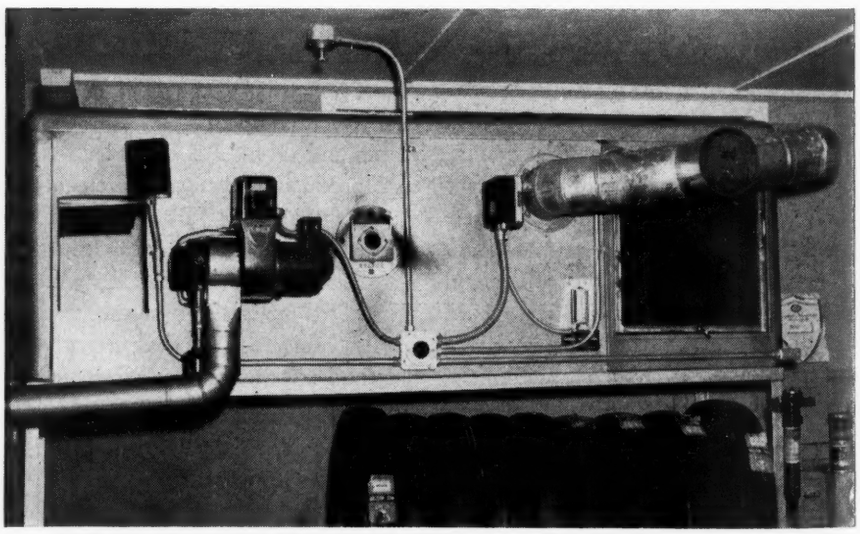
The elimination of radiators and piping frees space that can be used more productively for display and other uses. The installation of a hanging oilfired unit heater will save 50 to 200 square feet of floor area, in many cases—rentable space.

Oilfired unit heaters make large savings in first cost in these commercial buildings since the equivalent boiler, radiation, oilburner and basement boiler room represent in most instances a much larger investment. This type of structure in general means large unbroken areas to be heated, thus requiring little duct work for the proper distribution of the heat.

On the other hand, houses and multi-story buildings which are broken into a number of smaller separate sections or rooms are in general unsuitable applications for these new oilfired suspended heaters. The reasons are easy to comprehend, as follows: (a) The ceilings are so low that too much space would be taken out of the room; (b) an elaborate, space occupying, and expensive duct system would be needed for the proper distribution of heat to the individual rooms; and (c) the conventional central heating system for these buildings can be installed for a lower first cost.

Low Operating Costs

In its field of warehouses, factories, service stations, and the like, the hanging oilfired unit heater yields one further advantage beyond saving space and first cost of the heating plant—namely, lowest operating cost. The reasons for this fuel economy are (a) all the heat except the stack loss goes directly into the

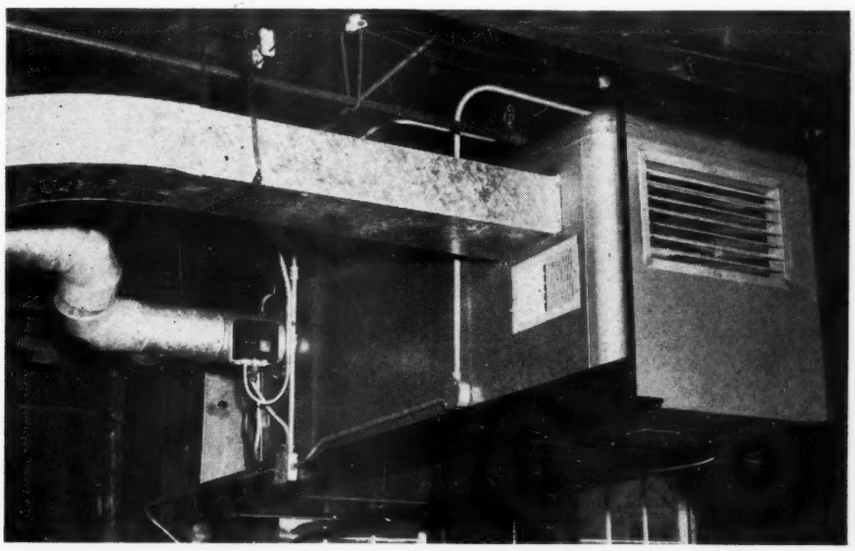


First installation *by Seltzer was for George & Ben's Auto Clinic at Winthrop, Mass. last October. Since then a dozen more have been sold at an average price of around $2,000. This one in the auto show room is of 100,000 Btu capacity, and to April 1 had burned $109 worth of fuel.*

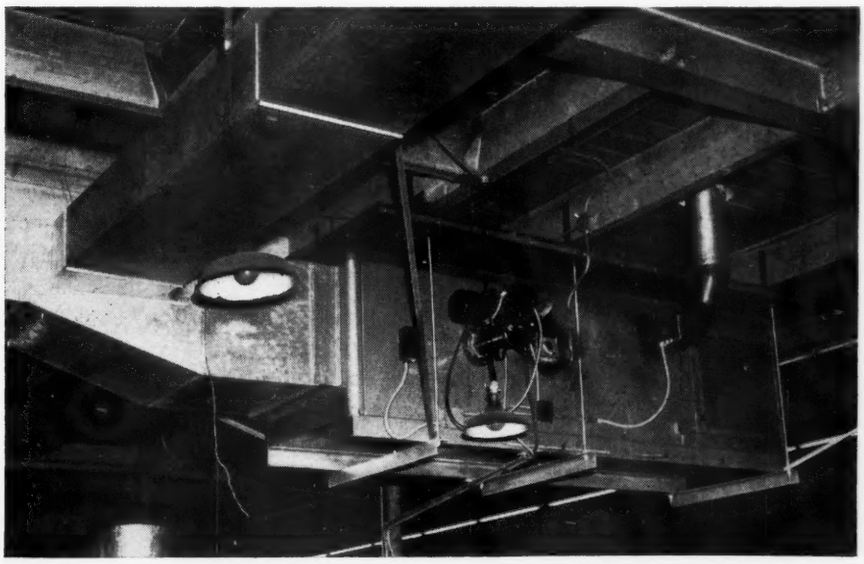
*President, Seltzer & Co., Boston.

space to be heated, whereas in a conventional system with a boiler room, there are radiation losses from the boiler, smoke pipe and piping, and (b) the blower system of the suspended unit heater directs the heated air most effectively to the areas requiring heat, compared to a considerable wasting of heat in a conventional radiation system due to the heat rising to the high ceilings.

In its large but specialized field the suspended oilfired unit heater is a piece of equipment that represents a new advance in oilburning engineering. It gives stores, and large area single or two story buildings, a space saving heating system at a lower first cost of installation and the lowest operating expense. Progressive oilheating dealers will give a better service to these buildings, with a generous profit to themselves, by adding this type of equipment to their business.



Loft building installation *in property owned by the Woburn Daily Times, Woburn, Mass. is of 150,000 Btu capacity with one duct running to adjoining office room.*



Cox Engineering Co., *Cambridge, operator of a large air conditioning sheet metal shop added a 50 x 150 ft. extension to its building, overtaxing the capacity of its original boiler heating plant. This 240,000 Btu unit heater supplements the work of the boiler at a fraction of the cost of enlarging the boiler room and buying a larger boiler. The suspended units sold by Seltzer are made by Shafco, Detroit.*

Max Ball Sees More Oil Ahead

MORE OIL "than we have ever had or dreamed" was predicted by Max W. Ball, director of the Oil & Gas Division of the Department of the Interior, in a talk before the Marketing Division of the American Petroleum Institute, May 6. "I envision for the public a more abundant supply of better petroleum products at lower relative costs than it has ever known," he said.

To those who believe that world demand for oil is likely to grow faster than the world-wide industry's ability to produce, Mr. Ball pointed out that "such predictions ignore economic history, discount the vigor and enterprise of the petroleum industry, and underrate the driving force of competition.

"It is true," Mr. Ball continued, "that the United States is now producing at its maximum efficient rate, with no additional productive capacity available from present wells with present transportation. It is true likewise that, according to a committee of the Independent Petroleum Association of America, we need to increase our daily production by 150,000 barrels before this summer is over. It is true that nowhere else in the world is there at the moment any noteworthy amount of additional production available at tidewater for shipment. These limitations on supply are transitory, however; they will not be with us always.

"Here in the United States, in the first four months of 1948, we have been drilling or have completed 1,188 more wells than in the corresponding period of 1947, an increase of more than 12%. Most of these are development wells, in proved fields. They are part of the drilling we need to do to catch up with our war-caused deficiency. These wells will yield results. I look for a material increase in crude production during the next few months, perhaps even the 150,000 barrels per day called for by the IPAA committee. I look for continued increases in production for many years to come."

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Haskell C. Carter, at the annual meeting of Iron Fireman Mfg. Co., Portland, Oregon, was named vice president in charge of manufacturing.

Tanks for Security

Dealers Promote Larger Customer Storage to Battle Shortage

by

A. E. Coburn

BIGGER and better tanks for domestic fueloil customers are occupying eastern dealers during the business doldrums they attribute to the oil shortage. The tanks are bigger—much bigger—than most dealers dared to recommend a few years ago, and are better for the customer and for the dealer. In the prewar days of plenty, few dealers would disturb an accomplished sale by suggesting that the new customer buy storage larger than a 275-gallon basement tank. The higher price might send the prospect shopping for some competitor who was satisfied with the basement tank sale. Further, there was little point to selling larger storage at the risk of discouraging the prospect. Oil was plentiful and cheap; money was tight, and customers representing new gallonage were hard to get. True, the dealer could deliver larger drops at less expense per gallon, but the customer saw little reason to pay for larger storage to cut the dealer's costs. That was in 1941.

This spring of 1948 finds about half the eastern oilheating dealers in an active campaign to sell larger storage, and meeting with a generous measure of success. Customers who went through last winter with a single 275-gal. basement tank are anxious to get away from their dependence on an inadequate storage tank. Prices of tanks and labor are high, but so is the price of a cold home. Customers have learned that the anxiety of watching a dwindling oil supply while waiting for the truck to arrive through the snow drifts is something to be avoided.

A quick check of dealers in northern New Jersey, a typical eastern oilheating area, shows 1,000-gallon tanks are by far the most popular of the large tanks. Of the 550, 1,000, 1,500 and 2,000 gallon sizes, nearly 70% of north Jersey sales are 1,000's. Five-fifties account for 17.6%, and 1,500's are 7.1% of the total for the four sizes.

Sunrise Oil Co., Englewood, N. J., is typical of dealers in the area. The company started about the first of April to campaign actively for additional tank business. Using jumbo postcards offered by Oil Heat Institute, and created by Kirk Shivell, Ridgewood, N. J., they made two mailings to 1,500 customers. The second mailing went out about ten days after the first. As a result of these mailings and direct selling effort, the company in the first six weeks sold one 550, eighteen 1,000's, and three 2,000-gal. tanks.

"We have about 60% of our customers on automatic delivery," explains A. Schmidt of Sunrise. "Due to delivery difficulties during the winter months we plan to average 190 gallon drops to single 275-gal. tanks. With 1,000-gal. tanks we plan to drop 600 gallons or more. In this way we have plenty of leeway without worrying our customers or ourselves. Snow and ice will not delay us more than a day or two, and we know the customer will not run out before we can get to him."

Home Fuel Oil Co., Ridgewood, N. J., started its tank selling activity in March, according to R. O. Burns, sales manager. Home used a double post card with a return side that made inquiry easy. The first mailing to 2,000 customers brought 36 replies. This was followed two weeks later with a similar mailing which brought eight returns. Twelve of the company's large tank sales up to the middle of May were the direct result of these mailings. Others are pending.

Since the start of its campaign the company has sold fourteen 550's; forty-one 1,000's; six 1,500's, and two 2,000-gal. tanks. Additional large tank business is being closed almost daily, but a growing scarcity of tanks, and particularly of piping is causing some concern. The few on hand will soon be sold, says Mr. Burns, and the company already has been notified that the prices are to be increased immediately.

Home sells and installs a 550 for $198. It gets $298 for a 1,000, and $398 for a 1,500-gal. tank. The 2,000-gal. size brings $469, but officials warn that any increase in the cost of tanks will have to be passed on to the customers. Price already is a block to many sales, and competition is selling locally below the Home price.

The company is promotion minded,

and has used local affairs to good advantage. A recent show sponsored by American Housewives Organized was dominated by Home Fuel Oil which used its booth to dispense helium-filled balloons to all the kids who could crowd in to get one. The colored balloons dominated the show, and there were few homes in the community that did not have at least one balloon carrying the legend along its side, "Increase Your Fueloil Storage Capacity."

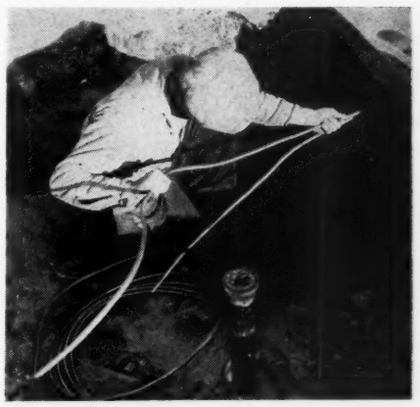
One sale as a result of the Housewives' show reveals the sales-mindedness of the whole organization. To promote the idea of additional large storage capacity, the company offered a 550 tank installed to the winner of a drawing during the show. The winner was named after the drawing, but he had no oilburner. The company offered to buy the tank back from the winner, according to plan, but found that the chief reason for not having a burner was the winner's fear of oil shortage. It was pointed out that tanks were available in sufficient size to store an entire season's fueloil supply, and the company easily could fill it each summer. This would eliminate any chance that winter oil shortages would find him cold. The company gave him credit for the 550 on a 2,000-gal. tank, and converted the winner from handfired coal.

A diagram in the Home booth showed how additional large buried storage tanks could be piped in parallel with present 275-gal. tanks, so that hand valves would allow supply and return connection with either tank, or any combination. With the supply line from the buried tank open and the return closed, for instance, it would be possible to fill the basement tank with return oil, or vice versa with an opposite valve arrangement.

Home bases its automatic fueloil delivery system only on the supply in the larger tank. Customers are encouraged to keep the basement tank filled as a reserve supply to be used in emergencies.

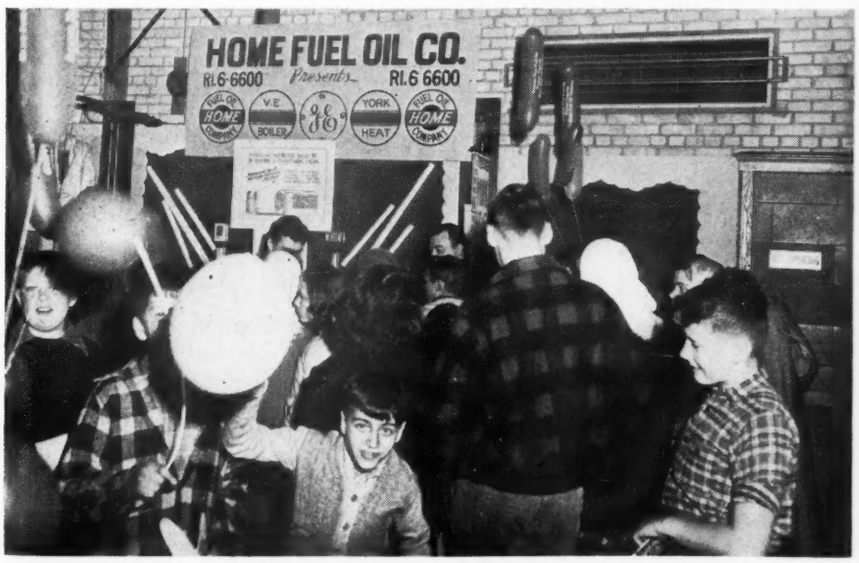
Resistance to the sale of new oilburners is not entirely from the public. Dealers are fearful of taking on more demand than they can supply satisfactorily. With almost no exceptions they are horrified at the thought of going through another winter like the last one, and few yet have been promised appreciably more fueloil than they had last season. Some express confidence that they will get more oil, but they have no desire to take chances. They feel that the possible harm of overloading far outweighs the benefit of immediate profit from new oilburner sales. Customers who are willing to install large tanks, the capacity of which represent all or a large part of the season's calculated consumption, get more consideration. It is felt there will be little trouble in filling tanks this summer, and new customers who can take an appreciable part of their winter requirements now represent a minimum risk.

Though tanks are becoming harder to get and higher in price, the real shortage at present is in 1¼ and 2 inch pipe. Some communities require galvanized pipe for fill and vent lines, and this material is extremely short. Towns that allow black pipe present less of a problem at present, but few dealers have any stock that would allow a large scale installation operation. The problem of finding pipe—and probably tanks—is expected to become greater as the season advances and sales increase seasonally. Malleable iron fittings, required in some communities, present another problem. If, as expected, the oil shortage problem disappears by next fall, an acute shortage of installation materials may hold oilburner sales at a relatively low level.



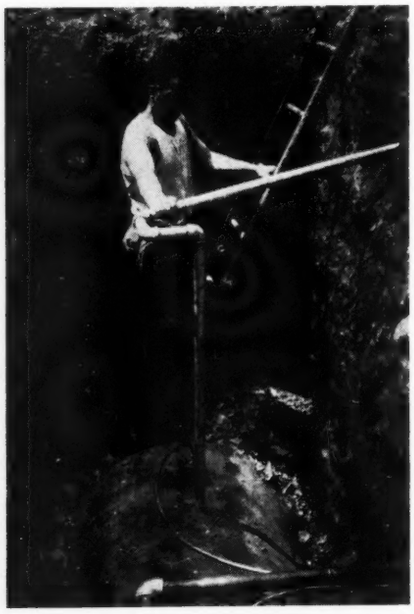
An effort is being made nationally to get an allotment of steel for oil storage tanks. The claim is being made as part of the oil industry's allotment, since the storage of fueloil on customers' premises is a very real part of our total oil storage capacity, and steel used to provide larger storage will be offset by a smaller tonnage required for new trucks and truck tanks.

It is estimated that there are 2,590,000 central heating installations operating with a single 275-gal. tank, and that these users will add about 500,000 additional 275's each year to increase storage capacity. There will be about 100,000 tanks required each year for replacements of 275's, and 250,000 more required to enlarge the storage capacity of those space heater and oilburner users who presently are using 55-gal. drums and smaller containers. Additional large tanks of 550 gallons or more for those users who will buy them to increase their storage are estimated at 111,000 per year for the immediate future. These figures do not include the tanks of all sizes that will be needed for new installations,



Kids' balloons *carried the gospel of larger consumer storage at local Housewives' show.*

estimated at 450,000 central heating installations and 600,000 space heaters in 1948. It now seems doubtful if aluminum tanks will be sufficiently plentiful for the next year or two to ease the supply of 275's, and no serious consideration has yet been given aluminum for the larger tank sizes.



Though an acute fueloil shortage next winter now seems improbable, the larger storage that is being installed is an excellent investment for the customer, and for the dealer. Dealer effort that is being made to promote the installation of large, buried storage will pay off for years to come in easier, more economical delivery, and in added assurance and freedom from concern on the part of the customer. In some areas where there is a price differential for larger drops, or for automatic delivery to larger tanks, the customer will benefit further from his investment.

◈

Ask Acceptance of Fueloil Standard

A RECOMMENDED REVISION of Fueloils, Commercial Standard CS12-40, has been submitted to producers, distributors, and users for written acceptance, according to an announcement by the Commodity Standards Division of the National Bureau of Standards.

This revision was developed by Technical Committee E of ASTM D-2, and endorsed by the Standing Committee for the Commercial Standard. The purpose is to bring the standard into line with current refinery practice and burner construction. The specifications cover five grades of fueloil for various types of fueloil burning equipment. A suggested form of identification, to indicate compliance with the Commercial Standard, is also included.

Upon request, mimeographed copies of the recommended commercial standard may be obtained from the Commodity Standards Division, National Bureau of Standards, Washington 25, D. C.

◈

N. Y. Fuel Committee Reports to Coordinator

MORE THAN 500,000 overtime hours were put in by drivers, helpers and other distributor personnel last winter in New York State to meet the fueloil demand by all but 1/10 of 1%, according to the report of the Petroleum Advisory Committee to the New York State Fuel Coordinator. Total estimated demand for all oils in the state during the winter was 3,690 million gallons, of which 1,450 million gallons were domestic heating oils. This is an increase of 320 million gallons of domestic fueloil, representing an increase of 28% for the state. About half the demand was in the New York Metropolitan area.

The committee estimates that residual oils totalled approximately 500 million gallons, 10% of which represented increase in demand over the winter before.

Savings made by consumers is estimated at 9% over the state.

The report cites two main factors as responsible for the greater demand: An increase of nearly 25% in domestic central heating oilburners, and large but undetermined increases in space heaters and residual burning equipment; and weather that averaged 12% to 15% colder than the winter of 1946-47.

Total emergency supplies made available to the Fuel Coordinator during the winter were 35,800,000 gallons, including 8,000,000 gallons borrowed from the Navy and another 8,000,000 gallons contributed by oil companies. One company was reported to have brought 30,000,000 gallons of oil from the West Coast during February, and absorbed the difference in higher transportation costs for a net loss of $10,000.

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Oil Heats 19% of Milwaukee Journal Survey Shows

OIL HEATS 19% OF the families in Milwaukee now, contrasted with 14.2% a year ago, according to the 1948 Consumer Analysis just released by the Milwaukee Journal. Gas use for heating increased from 3.4% of all homes a year ago to 4% now, while solid fuel use slipped to 77.8% from 83.2% last year.

A greater percentage of families living in homes that rent for less than $30 a month use oil than any other rental class. The high of 38.3%, representing 12,997 families, is attributed to the large number of space heaters used by people living in small homes and apartments.

Single family dwellings house 43.9%, or 104,907 Milwaukee families; duplex dwellings 41.2% or 98,357 families, and apartments 14.9% or 35,712 families. The table below shows the fuel use in these homes for heating during recent years.

Fuel Trends in Milwaukee

COAL OR COKE	Total Homes Per Cent	Total Homes Number	$50 up Rent	$40-$50 Rent	$30-$40 Rent	Under $30
1948	77.8%	185,985	71.3%	89.8%	84.7%	65.2%
1947	83.2	194,298	75.8	92.5	91.4	69.6
1946	86.0	196,879	80.3	93.9	91.9	73.5
1945	87.1	198,279	79.3	94.9	93.6	77.1
1943	86.4	188,704	77.7	93.7	93.6	74.2
OIL						
1948	19.0%	45,408	20.3%	8.3%	15.9%	38.3%
1947	14.2	32,928	16.2	5.7	8.7	33.3
1946	12.4	28,314	14.6	4.4	8.4	28.7
1945	12.8	29,201	16.2	4.7	7.7	29.0
1943	10.7	23,384	15.6	3.7	5.3	23.0
GAS						
1948	4.0%	9,559	8.5%	2.1%	0.6%	0.2%
1947	3.4	7,940	8.1	2.0	0.5	0.5
1946	2.1	4,830	5.0	1.8	0.2	0.1
1945	1.8	4,052	4.9	0.9	0.4	..
1943	1.9	4,083	6.3	2.0	0.3	0.5

Oilburner Flames

What The Color, Size And Shape Of Oil Burner Flames Signify

by

Charles H. Burkhardt*

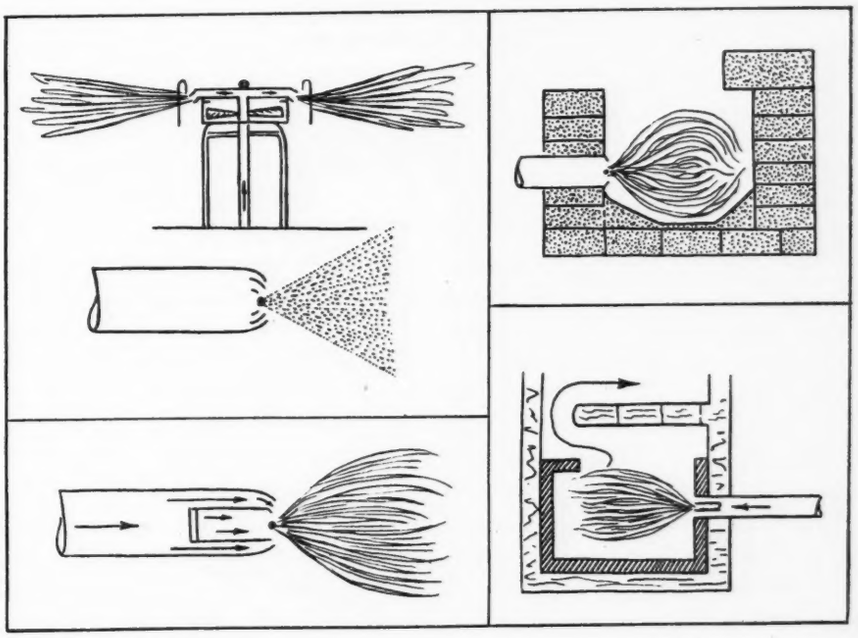
In a previous article we saw what took place chemically when fueloil burned and how the different chemical elements such as carbon, hydrogen and sulphur liberated a specific amount of Btu's in proportion to what part they represented by weight of the oil. The main chemical products of the combustion process proved to be carbon dioxide, water vapor and nitrogen.

While all these chemical reactions were going on, the physical evidence that they were occurring was the flame. The flame or fire is the actual expression of the chemical reactions and how well they are occurring. *Thus, by observing the flame, its color and structure, we immediately can determine to some extent how efficiently our oilburner is performing and how thoroughly and completely these chemical reactions are taking place.*

It must be remembered that only a gas or vapor will burn. Liquid or solid fuels do not burn of themselves. The heat applied drives off the vaporous matter and this is what produces the flame as it mixes with air and combustion takes place. Thus our problem in producing all fires is to turn the fuel into the gaseous state as quickly and as thoroughly as possible. With solid fuels such as coal, coke or wood, the only method we have of doing it is by heat. Thus, to start the process of changing the solid fuel to the vaporous state, we apply heat. This is the purpose of the kindling wood and paper used to start solid fuel fires. Once the volatile or gaseous matter is driven off, the burning reaction becomes self sustaining, as it generates enough heat not only to continue itself but to furnish a large amount to the surrounding boiler or furnace walls. We can see therefore that it is really the gaseous matter that is producing the flame. Notice that if a fuel such as charcoal which contains no volatile matter is burned, that a flame actually is not produced. Instead, the charcoal glows and in place of a real flame we have incandescence. The same is true of coke, which is coal with the volatile substances driven from it. The appearance of a flame shows that gases are being consumed in the burning. The appearance of the glowing incandescence gives evidence that the solid matter *carbon* is being heated and consumed.

All this can be applied to the burning of liquid fuels and especially the distillate fueloils. We will use No. 2 fueloil as the example. While with solid fuels, heat is the only method to start combustion, that is to drive off the volatile matter and get it burning, with liquid fuels we can start or facilitate the initial burning by other means. Thus as the purpose of the grate in the boiler is to provide the proper environment and means to make it easy to start and continue the burning process of solid fuels, so the purpose of the domestic oilburner is to provide the means of starting and continuing the burning process of liquid fuels. There are several methods whereby domestic oilburners proceed to break down the oil so that it approaches the vaporous or divided state more quickly, which it must do, for as was mentioned before, only gases burn with a flame. The methods used by domestic burners to facilitate the approach of the oil to the gaseous state are atomization and heating. Atomization may be caused by pressure, as with the high pressure gun type; by mixing with streams of air before leaving the nozzle as with the low pressure gun type; by centrifugal force as with most rotaries; and by heating as with the vapor-pot types.

We can see from this, therefore, that with No. 2 fueloil we have a number of alternate methods of preparing the fuel for combustion which cannot happen



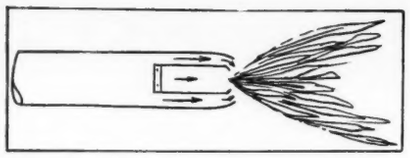
Four Important Conditions *necessary to produce controlled, stable fires with high flame temperatures.* (1—*upper left*) *thorough atomization, either centrifugal or pressure type.* (2—*upper right*) *insulating type firebrick chamber to fit flame shape.* (3—*lower left*) *sufficient air velocity and turbulence close to and at the beginning of the spray.* (4—*lower right*) *proper draft in the firebox to produce a low pressure area over the fire.*

*Department Head, Automatic Heating Department, YMCA Trade and Technical School, New York.

with solid fuels which depend on heat alone to initiate the process. The *ease* with which we can get No. 2 fueloil to approach the vaporous state by using mechanical means is the reason why heat can be obtained by merely turning the thermostat to start the entire process. *The difficulty* in starting a solid fuel fire because heat is the only initiating process we can use is appreciated by anyone who had to start a coal fire.

With No. 2 fueloil fires, once the burning has been started by electric ignition the combustion process instantly furnishes enough heat for the reaction to be continuous or chain-like. The flame is now established and by observing its physical characteristics such as size, shape and color, we can get an excellent idea as to what is going on. Temperature of the flame now becomes an important item for it is this flame temperature that is indicative of how efficiently our oil is burning and how well our burner is furnishing the air for combustion. The higher the flame temperature, the more efficient will be our combustion, the more rapid our rate of flame propagation and the higher our CO_2's.

High flame temperatures which are so desirable are dependent on a number of conditions. These are (1) the completeness with which the oil is divided by the mechanical means; (2) the environment (combustion chamber) and the material of which it is constructed; (3) the turbulence created by the air handling parts of the burner; (4) the lack of any pressure over the flame. The first condition is pretty well standardized and all domestic burners use one of the basic methods described. The second condition, that of combustion chambers is best achieved when insulating soft firebrick is used and the chamber conforms to the shape and size of the flame. The third condition is very important and can do much to raise flame temperatures. Air handling devices actually should inject the air with some velocity into the oil stream and thereby effect a thorough mixture right at the beginning of the spray. This will result in the air going to the fire instead of the fire going to the air. Oil flames that are large in comparison with the amount of oil being burned and that have numerous long tongues of flame reaching all over the combustion area



Controlled, *stable flame has a compact mass and definite shape. This flame is high temperature and combustion is complete.*

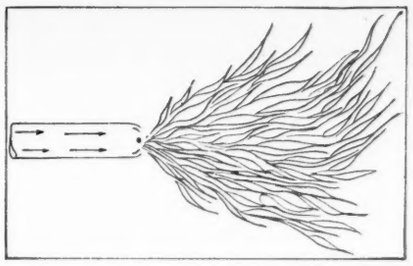
are in reality inefficient fires from the viewpoint of heat release. In such cases because of mechanical failure to mix the oil and air completely at the proper point, the hot gases are obtaining the necessary oxygen from the entire combustion area. These tongues of flame scattering through the outer edges of the fire are grasping for air and in effect reaching for the oxygen necessary to sustain combustion. If the air were applied properly, the fire would not have to reach for it and the flame would be smaller and more self contained for the same gallonage rate. Two burners can burn oil at certain G.P.H. rates, one with a flame only ten inches in diameter and of a specific consistent shape and with a fairly fixed cubic area; the other will have a flame of no specific shape and the diameter and cubic area will vary from split second to split second. The first burner will have a stable rate of flame propagation while the second will not (a cause of pulsations) and further the former will have a definitely higher flame temperature for the same amount of oil being consumed. This increase in flame temperature because of flame stability can result in increases up to 300° or 400° Fahrenheit, even though CO_2 readings may be the same in both cases.

The reason for this is that any given quantity of oil has a specific number of B.t.u.'s to be liberated. For example, in one gallon of No. 2 oil there can be 138,000 B.t.u.'s liberated per hour. One type of oilburner flame will liberate this fixed amount of B.t.u.'s over a smaller area than another, consequently the intensity with which they are released will be much greater. This intensity of release can be expressed in degrees Fahrenheit. The greater the intensity of the heat release, the greater the temperature in degrees Fahrenheit. Thus small, controlled fires are more efficient heat releasers and deliver the same fixed amount of B.t.u.'s in a given quantity of oil at a higher temperature than with large, uncontrolled fires. This is extremely important, for higher flame temperatures mean more water in the boiler evaporated to steam per pound of oil. This increase is due to the greater amount of heat passed to the boiler by radiation due to hotter flames. The amount of heat absorbed by a boiler because of direct radiation from the fire is dependent on flame temperature and the higher the flame temperature the greater the heat absorbed by radiation. The more heat we can get a boiler to absorb by radiation the better, for the less will be left to be picked up by conduction and convection which are relatively inefficient methods of heat transfer when compared to radiation. Thus small, controlled, specifically shaped oilburner flames for a given quantity of oil are what we want, as they provide the most efficient means of heat transfer as well as more complete combustion. Lazy, fluctuating fires even though they produce high CO_2's are not as efficient as small, controlled fires because these lazy, large fires scatter their heat release over a greater area and as a result have lower flame temperatures. To put it concisely, the smaller the fire for a given oil rate the more concentrated the heat release, the more thorough the combustion, and *the higher the flame temperature.*

The fourth factor, that of a lack of pressure over the flame area is important. In order for the fire to be definitely contained in shape and dimension, the combustion area should be a low pressure area, that is, somewhat below atmospheric pressure. This insures the free flow of the expanding hot gases as they leave the fire and progress through the boiler. At all times to insure this condition, there ought to be present a draft of .01 over the fire. With such a draft always present, there is little opportunity for pressures to build up and alter the

Comparative Flame Temperatures

Color	Characteristic	Degrees Fahrenheit
Red	Smoky	1000
Red	Dull-Lazy	1300
Red	Intense-Dark	1650
Red	Intense-Clear	1800
Orange	Deep Color	2000
Yellow	Clear	2200
White	Bright-Clear	2350
White	Dazzling-Clear	2750



Uncontrolled *oil flame tends to fluctuate and long tongues reach for air. Temperature of this flame is lower and combustion is less thorough.*

controlled shape and structure of our flame. Back pressures over the fire not only cause pulsations but constantly cause alterations in the size of our fire thereby changing the rate of heat release and lowering flame temperatures and seriously affecting flame propagation rates.

From this we see that oil burner flames can be divided into two types—*Stable* and *Unstable,* as regards their size and shape. Stable fires are controlled with properly applied air and result in higher flame temperatures because of their smaller size. Unstable fires are uncontrolled in flame and shape and have slower combustion rates over a larger area, resulting in fluctuating heat release rate and consequent lower flame temperatures.

About 95% of all our domestic oilburner flames are of the luminous flame type and this luminosity is caused by the glowing or incandescence of the particles of carbon. As the flame gets hotter, the particles of carbon glow more brightly and the fire becomes brighter and more luminous. With the average oilburner flame (providing the excess air is controlled) an increased brightness or luminosity means a greater flame intensity and higher flame temperature. Some may contest this point, but highly luminous oil flames at a fixed CO_2 will evaporate more water than less luminous flames at the same CO_2. This gives evidence that the luminosity resulting from the glowing carbon (the cause of flame color) does give an indication of higher flame temperature and a more concentrated heat release. From this we can conclude that as an oil flame goes from red to orange to yellow to white, the flame temperature will increase providing the CO_2 remains constant and the overall efficiency of the heat transfer process will increase. With blue gas flames, of course, this does not hold true.

Another important factor to be considered in oilburner flames is the noise or combustion roar. This sound is really of two types. One is the constant drone or roar as it may be called that results from the multitude of tiny explosions that are taking place as the gaseous oil vapors ignite and burn. The other is the vibration or pulsation that results from pressure over the fire. The first sound, that of the natural drone emitted as the rapid burning takes place is a necessary evil and can be regarded as an indication that combustion is lively and complete. With present day gun type burners a comparatively quiet flame is usually not an efficient one. It is the slow, lazy fire that has a comparatively low flame temperature. A flame full of sound and brightly luminous shows us that combustion is going on at a lively pace and flame propagation is extremely rapid. In such cases the flame will be smaller and hotter and of course more efficient because of its concentrated release of heat. Combustion noise which is concurrent with pressure atomized oil can never be completely eliminated and with a high CO_2 present it is an asset for it is physical evidence of an intense fire and rapid combustion rate. An intense fire with a rapid rate of flame propagation cannot be sustained without sound for the energy rate is so great that some must pass off as sound. The slow, lazy, quiet fire is usually the smoky one and prone to deposit soot quickly even if the CO_2 is comparatively good. If the rate of combustion is slow enough to present little or no sound, then it is easily disturbed by slight changing conditions in air delivery or draft, and soot and smoke is the likely result.

"Had any elementary experience—kiddie car, scooter, bicycle?"

Jersey Standard Sees Supply Position Brighter

ENOUGH OIL to supply all demands this year with the possible exception of occasional "dry spots" is expected by Standard Oil Company (N. J.). The prediction, contained in the current issue of Jersey Standard's publication "The Lamp," is based on a survey of the nation's oil requirements and the supplies to meet them, with the assumption that no extraordinary increase in military demand or interruptions in operations occur. Major points developed in the survey show that oil production this year should be considerably higher than in 1947; transportation facilities are expected to be in balance with supply and requirements; and refining capacity is adequate to handle the available crude and is being expanded to keep pace with added demand.

"As for next winter's heating oils," the Lamp article says, "the prospect looks better than it did last fall when stocks were relatively low and the industry was plagued by transportation bottlenecks. Next fall the industry should have both larger stocks, higher productive capacity, and better transport facilities.

With a bigger summer production of distillates, the industry should be able to begin the new season on October 1, with homeowners' tanks filled and with considerably more distillate stocks in its own tanks at major terminals than on October 1, a year ago.

Next winter's production of distillates and kerosene also should run higher. Thus, the article adds, production plus the usual seasonal draft on stocks should enable the industry to meet requirements substantially higher even than the record 218 million barrels of distillates and 74 million of kerosene supplied last winter.

Noting that transport shortages were one of the industry's worst handicaps last year, the article says that despite postwar shortages of steel and other materials, oilmen are beginning to catch up on their transportation problems.

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Joseph V. Donohue, Jr., newly appointed eastern regional sales manager, Rheem Mfg. Co., will have offices in the company's New York headquarters.

Figuring Heat Losses

"Short-Cut Rule" Gives Accurate Answers to Heating Problems

by
J. W. Schulz

A FUELOIL distributor who handles oilburners only to insure the continued growth of his gallonage complained recently that home owners are getting too fussy about the temperatures of their rooms.

"Some ten years ago," he explained, "we went into the burner business because we had to. Selling, installing, and servicing three sizes of pressure burners was not complicated. We just followed to the letter the 30 or 40 page manual the burner manufacturer gave us. We never worried about the heating equipment upstairs in the house, but just did a good job of oilfiring whatever furnace or boiler we found in the basement.

"But here's how fussy home owners are today. Last fall, I had to replace the old oilburner of a local big-shot. Keeping in his good graces means a lot to my gallonage, so when he said he wanted modern, concealed radiators in his living room and dining room, I got these for him even though ordinarily I don't handle radiators.

"All during the winter I had telephone complaints about the upstairs rooms being too cold, the bathroom being too hot or too cold, and the heat in the whole house having gone whacky since I replaced the old oilburner. My service men have not been able to stop the complaints. When a man calls at the house, he is dragged from one room to another to read the thermometers the owners hung up. People are too fussy when they demand, after we replace an old burner, a thermometer reading of 70° or 72° in every room of the house.

"But anyhow, I've got to please this customer somehow, and I'm asking everybody who knows anything about heating just what you do in a case like this."

An investigation showed that the complaints were started by the installation of oversize radiators in the living room and dining room. The oilburner installation and service manager picked the sizes of the new radiators. He had heard it's best to play safe with the sizes of concealed radiators in hot water systems, so on this extra-special job he replaced the old cast-iron free-standing radiators with concealed radiators of 40% to 50% higher capacity. As the room thermostat was in the living room near the new, big radiators, the upstairs rooms heated to only 60° when the thermostat was set for 75°. To prove this, the home owner hung a dozen thermometers around the house. Concentrating on the thermometer readings and keeping closed all the doors of the different rooms gave him information of heating system defects he had not noticed earlier, and he blamed all these on the new oilburner. More than half the rooms in the house, it developed, originally were fitted with radiators of sizes far from suitable for the rooms.

There's only one way to end a complaint of this kind and wind up with the desired temperature in every room in the house. Start at scratch. Measure the heat loss of every room, compare it with the heat-output of the radiator which heats the room. Switch to a different size radiator where this must be done to end underheating or overheating of a particular room.

Not even the best heating plants give exactly the same thermometer readings in every room of the houses they heat. Especially when the sun shines, the wind blows, or there's local heat in the house from cooking or taking hot baths, for example, eight thermometers in the different rooms of an eight-room house are apt to give readings different by at least two or three degrees. Still in all common sense, a home owner should get higher than 55° or 60° in his bedroom when the temperature is 75° in the living room, dining room, and kitchen.

The heat losses of the rooms in a house should be measured whenever questions arise about the sizes of the radiators and pipes, or the ducts and registers, used to heat the house. Don't, for example, install a new boiler or furnace and imply to the buyer that every one of his rooms will be heated to 70°, without first checking thoroughly on the heating equipment already in the house, to which you will connect your new boiler or furnace. If you fail to check the heat losses of the rooms, sooner or later one of your newly-installed boiler-burner or furnace-burner units will be blamed for certain rooms being too cold, or for the oversize oil bills which result from radiators or warm air registers being too small in certain rooms which the owner is anxious to heat to at least 70°.

Renovation work is especially risky for the heating equipment dealer who fails to check thoroughly on heat losses of the rooms, and there's an even added risk to converting a one-family house into a two-family house. Usually, in the old homes in certain areas, the bedrooms on the second floor of a one-family house are short of heat. As long as the second floor is used mainly for sleeping, there's no great discomfort in this for the occupants. Keeping the bedrooms cool

where this causes no complaints is a good way to save oil.

The trouble starts when a one-family house with an underheated second floor is turned into a two-family house without giving additional heat to the second floor. In one instance, the owner of a new boiler-burner unit, living on the first floor of a house just fitted with an

upstairs apartment of five rooms, ran high oil bills by keeping his thermostat at 80° to give his upstairs tenants enough heat. He held back in making the final payments on the boiler, finally was visited by an engineer from the boiler manufacturer. It turned out that the second floor apartment had less than half the radiation needed to heat it to 70°, even though this floor seemingly had been heated well enough before the house had been changed from one-family to two-family. The new boiler-burner unit had no capacity to spare. When the additional radiators were installed to heat the second floor properly, it was necessary to install also a larger boiler-burner unit. Checking heat losses of the rooms before selecting the boiler size avoids troubles and unnecessary high expenses of the kind experienced on this installation before the owner obtained the kind of heat which he thought came of buying a new boiler unit.

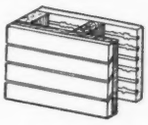
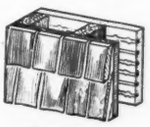
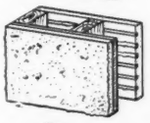
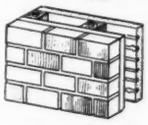
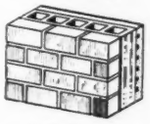
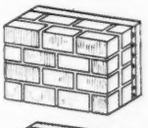
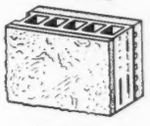
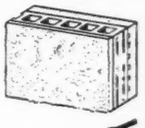
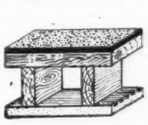
Which Method Is Safe

Which method should you use for figuring heat losses? One reader of FUELOIL & OIL HEAT recently asked that question, pointing out at the same time that the use of different thumb rules gives him answers different by as much as 100%.

The best way to figure heat losses is to study two or three of the best textbooks on heating, concentrating on what they teach about figuring heat losses. What one book fails to cover in a way which satisfies you probably will be covered by one of the other books. Or to save time, study just one good book on heating. You can't go wrong, for example, figuring heat losses according to the instructions given in the ASHVE GUIDE.

What is next best to a textbook on heating, for a man who must jump speedily into figuring heat losses, lacking the hours needed to master the instructions in a textbook? To begin with, there's a big DON'T for such a man. DON'T try to over-simplify by taking up company with one of the old thumb rules, such as the once-popular old-timer which is called the Mills' Rule or the 2-20-200 method. You should use either a modern method which deals in Btu's and conductivity factors, or a condensed method which gives you about the same answer as is obtained through use of the

Heating Engineer's Data on Heat Losses

	Description of material	*"U" Factor 1° F. dif., per sq. ft.*	*Conductivity per sq. ft. @ 70° dif.*
	1. Outside Wall, frame bldg. Clapboard or siding 1" wood sheating Plaster on lath on studding	.25	17.5
	2. Outside wall, frame bldg. Wood shingles 1" wood sheathing Plaster on lath on studding	.25	17.5
	3. Outside wall, frame bldg. Stucco 1" wood sheathing Plaster on lath on studding	.30	21.0
	4. Outside wall, frame bldg. Brick veneer 1" wood sheathing Plaster on lath on studding	.27	18.9
	5. Outside wall, brick bldg. Brick veneer 8" hollow tile Plaster on lath, furred	.24	16.8
	6. Outside wall, brick bldg. 12" solid brick Plaster on lath, furred	.25	17.5
	7. Outside wall, stucco bldg. Stucco 12" hollow tile Plaster on lath, furred	.22	15.4
	8. Outside wall, stucco bldg. Stucco 8" hollow tile Plaster on lath, furred	.27	18.9
	9. Pitched roof Wood shingles on strips Attic has no finish or floor Second floor ceiling plaster on lath	.29	20.3
	10. Same as above, but roof of slate, tile, or composition shingles	.32	22.4
	11. Flat roof Roofing on 1" wood Beams & large air spaces Plaster on lath	.32	22.4
	12. Wellbuilt single outside door, 1" thick	.70	49.0
	1½" thick	.50	35.0
	2" thick	.45	30.0
	13. Glass windows & doors single	1.10	77.0
	wellbuilt double	.45	30.0

Air Changes Per Hour*

Room with one cold wall.....1 air change per hour
Room with two cold walls .....1.5 air changes per hour
Room with three cold walls.....2 air changes per hour
Room with four cold walls.....2 air changes per hour

**For rooms having the usual number of windows and with fairly tight construction.*

INFILTRATION FACTOR: Amount of heat needed to raise temperature of one cu. ft. of air one degree: .02 Btu.

Btu method. The Mills' Rule is unsatisfactory today simply because its use will lead you to install 100 sq. ft. of radiation, for example, in a room which according to the modern, more accurate methods needs, say, 60 sq. ft. of radiation. Rules which cause you to install wrong-size heating plants should not be used.

Here's why we recommend the Short-Cut Rule which is given in full (for houses which are not insulated) in an accompanying box. First, this rule is based 100% on accurate Btu methods for figuring heat losses. You can check this for yourself, and you should in order to be able to depend on the rule if you want to use it. A complete explanation of the development of the rule appears in the book *Better Oilheating*.

Second, without doing any studying or research work, you can check on the accuracy of the Short-Cut rule simply by using it to figure the heat losses of a few rooms, and comparing the results with those obtained through figuring the heat losses of the same rooms through use of the modern Btu methods. If you don't know the modern Btu methods, obtain the accurate heat loss figures for the rooms by having a heating expert figure them for you.

Before you start using any method to figure the heat losses of a room, you must, naturally, take measurements in the room. First figure the area in square feet of the outside walls including the areas of the doors and windows in these walls. If, for example, the room has one outside wall 8′ high and 10′ long, and another outside wall 8′ high and 15′ long, then the outside wall area equals 8′ x 10′ plus 8′ x 15′ (the same, of course, as 8′ x 25′) or 200 sq. ft. Call the result the *gross* outside wall area. Second, figure the area of the windows, then of any outside doors, in the outside walls. Make clear notes of all these figures, for you will use the figures later. Deduct the sum-total areas of windows and doors from the *gross* area of outside wall, and you obtain the *net* area of outside wall.

Third, if the room has a "cold ceiling" (that is, if there is unheated space over the room, and not another room heated to 70°), figure the cold ceiling area by multiplying the length of the room times the width of the room.

Fourth, figure the volume of the room in cubic feet. If you have figured the ceiling area, obtain the volume figure simply by multiplying the area of the ceiling times the height of the room.

All your figuring is done in terms of feet, square feet, and cubic feet, of course. Don't make a fetish of accuracy. Your figures for the length, width, and height of a room need be accurate only to within, say, two to four inches. For reasons given in detail in earlier articles on this subject, the best heat loss figures obtained by different well-qualified heating engineers necessarily differ by 5% to 10%, and the exact heat losses and heating requirements of a building are never known.

Short-Cut Rule for Figuring Heat Losses

1. **OUTSIDE WALLS AND COLD CEILINGS**
   Multiply net area by 17.5, (This factor is for the nine out of ten uninsulated homes which are of average construction. Add 20% if the house is exceptionally hard to heat. Deduct 20% if the house, although not insulated, is of extraordinarily good construction which makes it very easy to heat.)
2. **WINDOWS**
   Multiply single-glass area by 77; multiply double-glass area by 49.
3. **OUTSIDE DOORS**
   For ordinary single doors about 1″ thick, multiply the area by 49; for unusually thick, heavy doors, multiply by 35.
4. **AIR-CHANGE**
   For one air-change per hour, multiply volume of room (in cubic feet) by 1.4; for most rooms, figure 1.5 air changes per hour.

Add the four figures obtained by going through the above four steps, and you get the heat loss of the room in Btu's per hour, for 70° room temperature and zero outside temperature. Add one-seventh to the sum if you aim to heat the house to 70° on days ten degrees below zero; add two-sevenths to the sum if in your locality the heating plants are designed for weather as cold as 20 degrees below zero.

For windows and doors, measure the openings. Open a door, then measure the length and width of the resultant opening. Open a window to measure its length and width; measure the opening in the frame of double-hung windows.

Having assembled your area and volume data for the room, apply the Short-Cut Rule. Simply follow the directions in the box; after you take the four steps, add up the four figures and the answer is in terms of Btu loss of the room for 70° inside, zero outside.

The factor of 17.5 for outside walls and cold ceilings comes simply from multiplying 70° temperature difference times the "U Factor" of .25, obtained from the accompanying list of "U Factors." Through checking the accompanying list of factors, and better still by referring to textbooks which list "U Factors" for many types of walls, you can assure yourself that for typical uninsulated house construction, and for the house you are figuring, the factors of .25 and 17.5 apply.

Effect of Insulation

What to do about insulated houses, encountered more and more frequently today? To be extremely accurate, find out from a textbook the "U Factor" which matches the insulated wall you encounter. You may find, for example, that a "U Factor" of .075 matches the insulated wall. Multiply this times 70° to obtain the proper key figure which, when multiplied by the net area of the wall, will give you the heat loss of the wall in terms of Btu per hour at 70° temperature difference.

If you haven't a heating textbook at hand and encounter an insulated wall, use your best judgment to make a proper allowance for the insulation. You may figure, for example, that an excellent installation of blown-in rock wool insulation reduces the heat loss of an ordinary frame-construction wall by 70%. On that basis, you would figure the heat loss of the wall as 30% of the heat loss of an uninsulated wall of the same type. Instead of using the factor 17.5 in item #1 of the Short-Cut Rule, you could use a factor of 30% of 17.5, which is 5.25; then, multiplying 5.25 times the area of the insulated wall would give its heat loss.

Perhaps alarmed at the great reduction in heating plant size which comes

The Public IS READY TO BUY THESE

They Save Oil And INCREASE Comfort

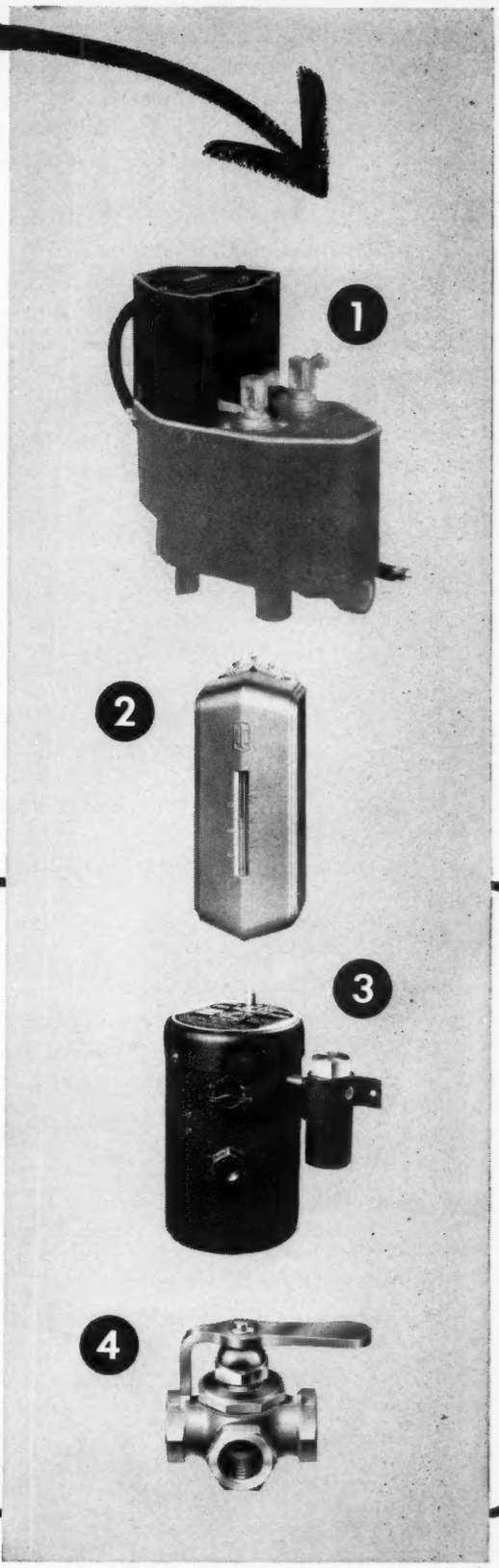
and they are PROFITABLE to sell

The public still has a vivid memory of the oil shortage scare last winter. It was mostly a *scare*, but—people are ready to buy equipment which will save oil without discomfort.

"Detroit" Add-On Control and "Detroit" No. 411 Room Thermostat save oil and *increase* comfort, by avoiding overheating.

"Detroit" CRC-433 Fuel Transfer Pump makes supply automatic, CRC-520 Three Way Valve permits installation of a second tank for reserve supply.

The market is new, unsaturated; the equipment easy to sell, easy to install. Good profit repays your effort.



1 "DETROIT" CRC-239-P and CRC-239-PF Add-On Controls

Mount either of these on a manual type CRC-239 Float Valve. Connect to lighting circuit, and run two low voltage wires to the "Detroit" No. 411 Room Thermostat. That's all there is to making the space heater or floor furnace automatically self-regulating. CRC-239-P is for space heaters—CRC-239-PF for floor furnaces. Built-in transformer.

2 "DETROIT" No. 411 Room Thermostat

Eliminates overheating and consequent fuel waste. Provides accurately leveled temperature control. Combined with the Add-On Control, it saves oil, improves comfort. Space heater and floor furnace owners are waiting for this combination.

3 "DETROIT" CRC-433 Fuel Transfer Pump

Automatically keeps heater supplied with fuel—no more hand carrying and filling. No spilling, no mess. No attention needed after installation.

4 "DETROIT" CRC-520 Three Way Valve

Used on dual tank installations. Second tank provides reserve supply and permits buying of oil in more economical quantities. Three positions—left hand tank, right hand tank, and all off. Cast brass body—⅜" or ½" F.P.T. connections.

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"DETROIT"

fueloil & oil heat

of figuring the best house installation at its textbook value, certain heating engineers simplify and play safe at one stroke by counting the heat loss of any well-insulated wall or cold ceiling at half the value of the heat loss of the same area with no insulation.

Among the most important reasons why the real heat losses and heating requirements of rooms are never known lies in the impossibility of figuring the air-change or infiltration loss accurately. This loss is estimated, rather than figured. It depends greatly on (a) the number and size of the outside doors and windows, compared to the size of the room, (b) whether or not the doors and windows are tight-fitting, and (c) the speed and direction of the wind outside the house. During high winds, the air-change loss of a sun room with loose-fitting windows may be three to five times greater than the air-change loss of the other rooms in the house. It may be best to figure at least four air changes for such a sun room, particularly if the owner will judge the performance of the entire heating system by the temperature in the sun room on coldest, windiest days. Installing two or three small radiators or warm air registers in a large, hard-to-heat sun room, incidentally, permits the owner to use all of these only when winds multiply the heat loss, but to avoid overheating during normal weather by turning off some of the sun room heat.

Better Calculation

During recent years, more and more of the technicians employed by oilburner and fueloil companies have become interested in figuring heat losses, since these men are finding out that burner owners are becoming more and more exacting, and that handling difficult problems involving comfort and fuel economy depends on figuring the heat losses of the rooms. Proper size of the boiler or furnace in a house cannot be checked without figuring the heat losses, as you can't take for granted that the sizes of the installed warm-air registers or steam or hot water radiators are correct for the heat losses of the different rooms. House insulation experts, also, must talk in terms of heat losses to make maximum sense; the more the insulation cuts the heat losses, the more fuel it will save.

If you find it necessary to measure heat losses for the first time, be wise and make certain you do not waste your time and wind up with totally incorrect figures because you use an obsolete, incorrect method for figuring. Don't use the Mills' Rule (which also is called the 2-20-200 Method), for example. Follow the instructions given in a good textbook for figuring the heat losses.

Short Cuts Within 5%

This Short-Cut Rule, which was developed by the author, is now used by many heating experts who find that when used properly it gives the same answers within about 5% as come of using the more time-taking, tedious Btu methods along with the same judgment factors. The big advantage of the Short-Cut Rule lies in the fact that you quickly learn and remember the important factors used to find the Btu losses of typical walls, cold ceilings, doors, windows, etc. You can figure heat losses of typical homes accurately, then, without having a textbook with you. In addition, you learn quickly to make proper allowances for walls, ceilings, and air-change conditions different than usual. You should consult a textbook when you face problems greatly different than the every-day run of heat loss problems, and for which the most accurate answers are desired.

"If that's my wife, record it, and I'll 'Yes, dear' it later"

Ability To Pay Basis For Home Building, Says Report

THE PRIVATE BUILDING INDUSTRY during 1947 provided new homes in proper proportions for families in every income group, except the lowest tenth and highest fifth of the country's income brackets, according to Melvin H. Baker, chairman, Construction Industry Information Committee. Also, by the third quarter of the year, new homes were being started at the record-breaking rate of one million units a year.

These statements are taken from a study of nonfarm single-family house construction prepared by the Committee's economic consultants. Official figures taken from the President's Economic Report of January 1948 and data released by the Bureau of Labor Statistics formed the basis for the conclusions. To refute the contention that the industry has been building homes only for the upper third or tenth of the nation's families, the report held that homes were built in approximate proportion to the ability to pay, citing these statistics.

28% of the families had income below $2000. Excluding the families with incomes of less than $1000, who customarily are not in the market for new houses, 15% of the families had incomes between $1000 and $2000. Those families on the average could afford homes costing $4500 and less. And 20% of the new homes were in that bracket.

20% of the families had incomes between $2000 and $3000. Those families could afford homes costing between $4500 and $7000. And 23% of the new homes were in that bracket.

18% of the families had incomes between $3000 and $4000. Those families could afford homes costing between $7000 and $10,000. And 25% of the homes were in that bracket.

13% of the families had incomes between $4000 and $5000. They could afford homes costing between $10,000 and $12,500. And 18% of the new homes were in that bracket.

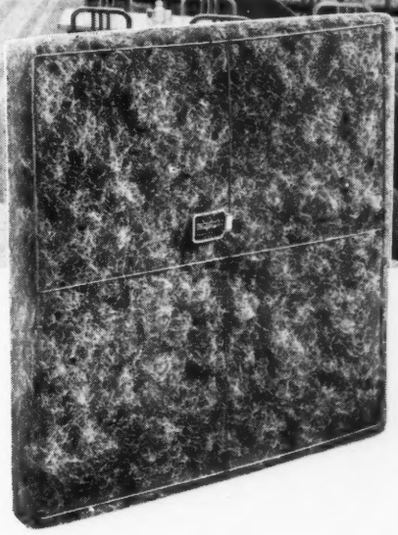
21% of the families had incomes in excess of $5000. They could afford homes costing $12,500 and up. But only 14% of the homes were in that bracket.

Frank A. Gabriel, of the Perfection Stove Company, recently retired as sales manager. Prior to his association with Perfection Stove, he was connected with Patterson-Sargent Co. Mr. Gabriel was greatly helpful in the setting up of Perfection's present merchandising organization, and for many years conducted two or more meetings annually.

For Summer air conditioning replacements feature the

NATURAL HAIR FILTERS THAT ARE STEALING THE SHOW

Thompson's Restaurant, Cincinnati, Ohio



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The natural hair filter with the original patented *self-sealing* edge.

Today the superiority of natural hair as an air filtering medium is being acclaimed by more and more users. For large installations in famous chain restaurants, drug stores, office buildings, railroads—where banks of filters are used to filter air under forced circulation—Wilson's Edgeseal H*AIR* Filter is stealing the show. *It springs to fit.* Closes up leaks around edges. Double filtering action traps more dust yet permits freer flow of super clean air. It's the *natural hair* that does it—a natural reservoir and dispenser of oil which is the dust trapping element. So ride with the tide of filter popularity. Feature Wilson Edgeseal H*AIR* Filters for this summer's replacement business. Write now for particulars and the name of the nearest Wilson distributor.

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WILSON'S HAIR FILTER

fueloil & oil heat

Oil Company Executives Comment On Opinion Survey

PUBLICATION IN THE May issue of the Public Opinion Survey, conducted by Benson & Benson, Inc., research organization of Princeton, N. J., for FUELOIL & OIL HEAT, has evoked considerable comment from both oil company executives and equipment manufacturers.

Reproduced below are pertinent paragraphs from some of the letters received from major and independent oil company officials. All seem to reflect the opinion that the blame for last heating season's supply situation could not be placed entirely at the oil company's door and several express enthusiastic approval of the program of cooperation between the burner and oil industry undertaken by Oil Heat Institute at its April convention in Chicago.

Excerpts from the letters follow:

"I do not go along with the conclusion that the 'oil industry appears to have incompletely or ineffectively informed the public of the facts causing the shortage in that about as many people say it was caused by exports as say it was due to the inability of domestic transportation and storage facilities to take care of the expanded demand.'

"The foregoing conclusion is based on the table 'Reasons for Recent Shortage.' If you look over the reasons advanced, you will find that each of them was advanced some time or other by someone who was talking about the shortage. They were not all advanced by the principal spokesmen for the industry, but they were all advanced by somebody and some of the reasons evidently 'took' with some people better than the other reasons did. This could be accounted for by the attitude of the reader or listener, as well as by the effectiveness of the writer or speaker. The claim was made that there was an 'artificial shortage, oil companies holding for higher prices.' Some persons evidently believed it. Most of them probably heard the charge or read about it. The fact that the charge 'took' with less than 10 per cent of those asked would seem to indicate that a better job was done by those telling the other things.

"There was no one reason for the shortage; hence, it should not be expected that the responses should be concentrated on a single reason. Some of the reasons evidently were based on the experiences of the individuals, others on what they read or were told. The bad weather reason is one that could have been noted personally. The industry stressed others. If you single out the reasons advanced by the industry, they will cover more than 60 per cent of the responses. The industry itself did not advance only a single reason. It said transportation difficulties, greater demand, bad weather, strikes, greater military and Government demand, not enough productive facilities, Government controls and some said there was no shortage. None of the 540 said there was a shortage of crude oil; neither did the industry or Government.

"I interpret the responses as indicating that the public responded in the way it could have been expected to respond to the many varieties of 'stories' told by the industry and others.

"The report as a whole supports my continuous belief that you are maintaining your pioneer status as an individual in the oil industry. You do quickly and effectively the things which should be done by the oil industry even before the industry leaders are aware of the need. I doubt if the industry leaders yet are fully aware of the changing pattern of the oil demand and how the change will affect them in the halls of legislation."

E. B. Swanson
OIL & GAS DIVISION,
U. S. DEPARTMENT OF THE INTERIOR

* * *

"I must confess that I was surprised at some of the results and for that reason the report was of great interest to me.

"Since The Texas Company is, perhaps, less involved in the fueloil business than any other major company I probably should not concern myself with this problem, but I do so from the viewpoint of the industry rather than any one company. I recognize that there has been a serious drop in public confidence, but I do not feel that this is due to any failure on the part of the oil companies."

Walter Hochuli
THE TEXAS COMPANY

* * *

"Thanks for sending me that most interesting analysis or survey of public opinion on certain questions having to do primarily with fueloil.

"I do not know what to say except that I hope the industry will be prepared to meet the fueloil demands next winter, and, if it cannot do just that, everyone concerned will prepare themselves for the criticism which you and I know will be inevitable."

William R. Boyd, Jr.
AMERICAN PETROLEUM INSTITUTE

* * *

"There are many startling findings in this survey which should give rise to considerable thought on the part of the oil industry, but I do believe that under the circumstances, a good public relations job was performed during the past heating season. One of the things that really amazes me is that nearly one-fourth of the people who have oil furnaces did not realize that an oil shortage existed. Of the balance of respondents who had oil furnaces, there was an even split of those who were inconvenienced and those who were not affected by the extremely tight situation between supply and demand of furnace oil last season.

"It is my personal belief that your survey is a most interesting one and that it is also highly constructive. It should point up the job facing the industry during the next two years."

Benedict Saurino
SUN OIL COMPANY

* * *

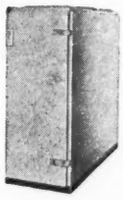
"This booklet is very informative and although there is no demand for heating oil in Texas, many of the answers to the questions are comparable to general questions pertaining to our distribution problems.

"The observation that there is a possibility that some good will of the general public has been lost in favor of industrial users is indeed interesting. We also recognize the need for the dissemination of information at all levels and the education of the public on the oil industry."

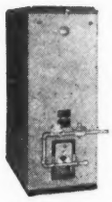
R. M. Stephens
HUMBLE OIL & REFINING COMPANY

The MONCRIEF "HEATOMIC"

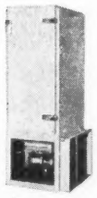
The LITTLE Unit that gets BIG results!



Series L
Gas Fired, Steel
Air Conditioning
Unit



Series W
Gas Fired, Steel
Gravity Furnace

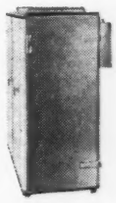


Series U
Gas Fired, Steel
Utility Air Conditioning Unit

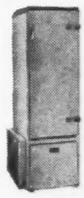
Series
AC-700-F

• Like the atomic bomb, Moncrief's "Heatomic" all fuels, air conditioning unit is the talk of the heating market—it's the unit that lets-you-in on any heating job. Here's a new design in a coal-fired air conditioning unit that can be readily converted at any time, even after installation, to burn oil, gas or for stoker firing.

The excellent design and construction of the rugged, steel heating element, with long fire travel and large heating surface provide the necessary qualifications for the versatility of this unit.

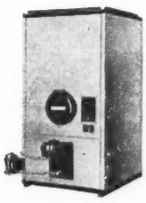


Series CL
Gas-Fired, Cast Iron
Air Conditioning Unit

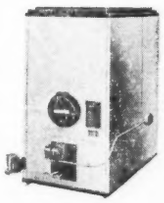


Series CU
Gas-Fired, Cast Iron
Utility Air
Conditioning Unit

Series P
Oil Fired, Steel
Air Conditioning Unit

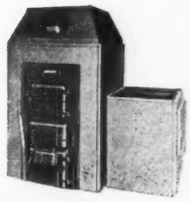


Series VW
Oil Fired, Steel
Gravity Furnace

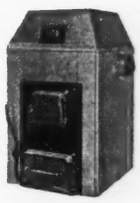


Series VL
Oil Fired, Steel
Air Conditioning Unit

Series VU
Oil Fired, Steel Utility
Air Conditioning Unit



Series AC-700
Coal-Fired, Steel
Air Conditioning Unit



Series C
Coal-Fired, Cast
Gravity Furnace

Series 700
Coal-Fired, Steel
Gravity Furnace

THE HENRY FURNACE COMPANY

Medina, Ohio

HEATING AND AIR CONDITIONING UNITS — MONCRIEF SINCE 1895 — FURNACE PIPE AND FITTINGS

fueloil & oil heat

"I was tremendously interested in reading your fine report resulting from a survey of public opinion on questions relating to fueloil and I want to thank you for sending me a copy of this material."

Roger Wilkinson
SOCONY-VACUUM OIL COMPANY

* * *

"While we are not manufacturers or suppliers of fueloil, we do supply other types of fuel for homes and industry and the conclusions reached by this survey might possibly be an indication of the attitude of the general public with reference to our phase of the petroleum industry."

W. K. Warren
WARREN PETROLEUM CORP.

* * *

"We have been very interested in the contents of your survey and find it gives a rather complete picture of how much public confidence has been hurt this past winter as regards oilheating of homes.

"With the continued short supply situation confronting the oil industry on all overhead products for the balance of this year and throughout the coming heating season, this survey should prove invaluable in our efforts to rebuild public relations. Also to help in explaining to the public through various publicity releases and advertisements a better, more understandable explanation of the many facts which have brought about the present situation.

"We passed this survey on to our advertising department, and honestly believe that a better type of publicity, more cooperative with regard to better understanding of public attitudes, will prevail."

H. L. Cannell
STANDARD OIL CO. (OHIO)

* * *

"Thank you very much for sending me the public opinion survey on fueloil. The consumer reactions indicated are, I think, very significant and it is helpful to have this information."

Stewart Coleman
STANDARD OIL CO. (N. J.)

* * *

"It is indeed unfortunate, as I personally see it, to have reached the stage where the provable supply of fueloil seems to be so far inadequate to meet the demonstrated increasing demand. I don't believe that anyone in the oil industry can possibly feel other than regretful that the situation should be as it is. I'm sorry that some oilburner men —particularly vocal in that industry— seem to be inclined to criticize and discredit so thoroughly and so bitterly the oil industry itself, including, in particular, the 'major oil companies.' From my own viewpoint, I think those criticisms are, to a large degree, unfair and uncalled for. At the same time I completely understand why all oilburner manufacturers are concerned about the situation, and perhaps being so concerned, cannot completely control what they think and consequently what they say.

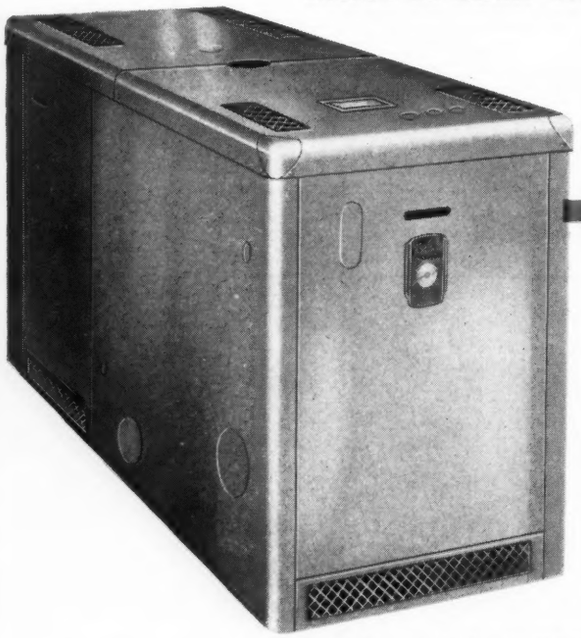
"I did feel that at the recent OHI meeting in Chicago some considerable progress was made in bringing together some of the leaders of both industries in a manner such that there should be less misunderstanding in the future than has been the case in the past. I truly hope this actually proves to be so."

Frank E. Spencer
SOCONY-VACUUM OIL CO., INC.

The Bethlehem DYNATHERM

is Easier to Sell!

It offers all the benefits of truly AUTOMATIC HEAT backed by a century-old company whose products have been known for years in better homes throughout the world as the "finest, most thoroughly engineered oil burner ever built."



Here is a completely welded steel heating plant with the money-saving, fuel-saving "whirling flame" . . . a NEW revolutionary oil burning principle that squeezes more heat out of every drop of fuel . . . that has the same heating capacity in a fraction of usual boiler size . . . that is as automatic as an electric refrigerator!

A few exclusive Bethlehem Dynatherm territory Franchises are still available. Wire or write immediately for full information.

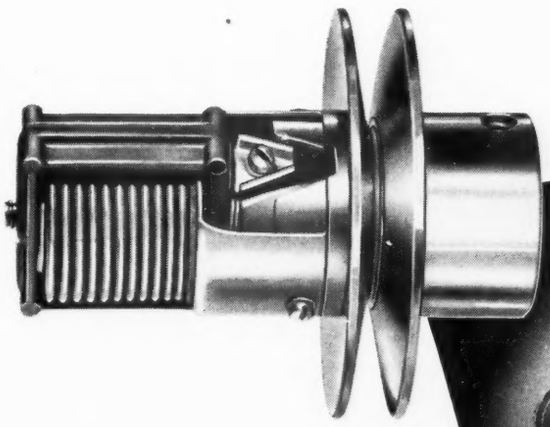
THE BETHLEHEM FOUNDRY & MACHINE COMPANY
BETHLEHEM, PENNSYLVANIA

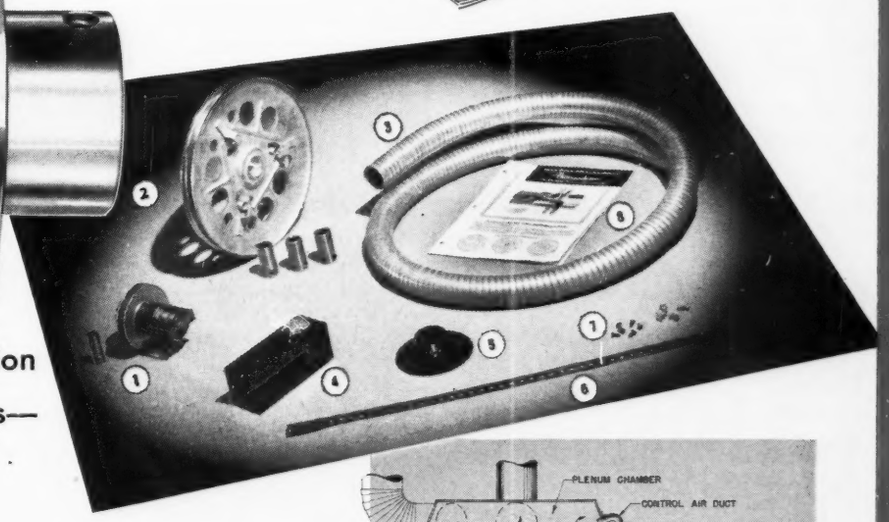
WEBSTER ELECTRIC

Thermodrive

meets a demand to conserve heat

This means SALES to you!





for year-round installation of warm air heating units—

OIL... GAS... COAL...

Thermodrive has two outstanding sales features. First, it conserves heat and fuel by regulating the flow of warm air...an economy that is to every householder's interest. Second, there is greater comfort in the home where Thermodrive is part of the warm air heating unit.

Thermodrive is a quality product developed to a point of perfection by Webster Electric engineers and has the top quality performance characteristic of all Webster Electric products.

Thermodrive comes with complete installation kit. It can be installed easily and quickly on present warm air equipment. Winter installations require only a short shut down.

If you are manufacturing warm air equipment, Thermodrive will improve your product. If you are servicing present warm air systems, Thermodrive will mean extra sales for you.

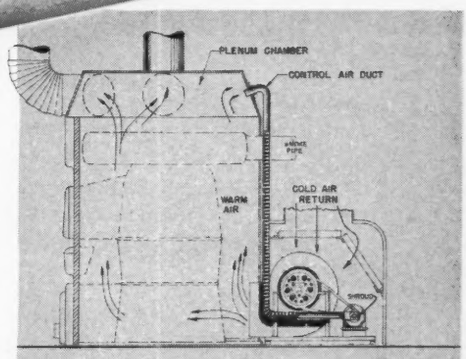
Write for complete information and take advantage of this extra sales volume.

WEBSTER ELECTRIC
RACINE WISCONSIN

Established 1909

Export Dept. 13 E. 40th Street, New York (16), N. Y. Cable Address "ARLAB" N. Y. City

"Where Quality is a Responsibility and Fair Dealing an Obligation"



Here's how it works...

Thermodrive pulley replaces present drive pulley and increases fan speed as bonnet temperature increases. Speed increases can be as much as 65% from low to high. Off-cycle operation is reversed . . . fan continues at decreasing speeds until cut-out temperature on bonnet control is reached. Warm air "sample" is continuously drawn from bonnet and discharged over thermostatic bellows, which actuates sliding sheave of split pulley. This changes diameter and results in increased or decreased speed of fan.

"Our tabulations of certain facts contained in the report indicate that 53% of the answers provide understandable reasons for the shortage, and some of the benefits from this survey may be given to the public relations efforts of the oil industry. 15% of the answers were unfavorable to the oil industry and 32% might indicate erroneous propaganda or insufficient public relations efforts. In my opinion the 15% who gave unfavorable answers will never accept the efforts of the public relations group to provide the public with the truth, but the 32%, half of which did not know the answers and half of which blamed it upon the export situation, is the field to which the public relations programs should be directed."

E. T. Knight
ATLANTIC REFINING COMPANY

* * *

"If this survey could be presented to the proper officials in the oil industry, I think that it should also serve a very excellent purpose because the results of this survey would indicate that the oil industry does not appear in a very favorable light to the public at large and that the major oil companies, in particular, are weakening their positions. This, of course, is something that they should not want to do in view of the continuing encroachment of Government on business.

"It would appear to me that the burner industry could make good use of the statement which is made as follows:

" 'It seems apparent therefore that in not providing adequately for home heating, the oil industry has to a considerable extent traded the good will of the general public for that of industrial users.' "

C. R. Jonswold
ARROW PETROLEUM COMPANY

* * *

"The information disclosed in the report is most enlightening and should prove of interest to all concerned in the marketing of fueloil. I am asking my associates in the company's Eastern Division to study the report as it contains information that may be of value."

William F. Humphrey
TIDE WATER ASSOCIATED OIL CO., INC.

* * *

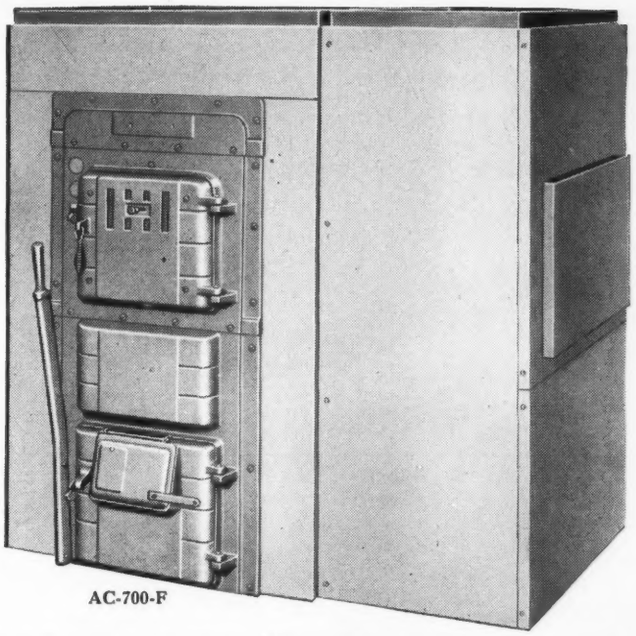
"At the moment the survey's biggest value, as I see it, is that it may help convince the major oil companies that it is well for them to look after the oilheating market which has been built up over the past twenty years and not let their attention be completely diverted by the new and possibly somewhat more attractive market for diesel fuels.

"My greatest concern at this time is that the prices of heating oils will stay up longer than they should. There are certain large oilheat markets in the East and in New England which do not now, and may not for a long time in the future, have natural gas available. So long as natural gas is not available and the only competition is coal, those markets will pay a retail price of 13¢ or 14¢ per gallon for No. 3 fueloil. But, the midwestern markets, which should have natural gas available in two to four years, will rapidly switch from oilheating to gas heating. Our experience during the '30's was that people who had changed from oil to gas could not be reconverted to oil."

W. F. Schierholz
FUEL OIL COMPANY OF ST. LOUIS

There is more
than meets the
EYE . . . . . in BUYING BLOWERS
In selecting a blower consider not only engineering features and construction of the blower itself, think also of the reputation of the company from whom you purchase it. With materials short, have they been fair in their allocation? Have they done their level best to hold prices down and maintain your profit? Have they been co-operative and helpful in emergency situations and on special developments? You will find these added values, beyond the merchandise itself, when you buy from Brundage. Brundage offers you the combination that assures complete customer satisfaction; the best engineered blower available today, fine workmanship by craftsmen who know how to be careful, and fullest cooperation. When next you think of blowers remember, Brundage Is A Better Buy.
THE Brundage COMPANY
Blower Specialists Since 1919
549 NORTH PARK STREET
KALAMAZOO 11, MICHIGAN

PARLAY Luxaire's "3 in 1" UNIT



AC-700-F

WIN BOTH WAYS!

1. Engineered for

1. COAL
Hand Fired
Stoker Fired

2. EASILY CONVERTED *and well adapted for*

2. OIL

3. *and*

3. GAS

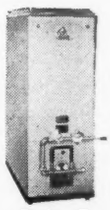
2. Greater SALES
Greater SATISFACTION
Greater PROFIT

Install today for coal—with confidence! Convert at any time in the future to oil or gas with the same confidence.

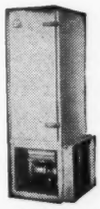
Luxaire's "3 in 1" coal unit is designed and constructed so as to provide the necessary requirements and versatility for converting to oil or gas or stoker firing.

Luxaire's "3 in 1 combination" air conditioning unit is your assurance that you can meet the demands of the home heating market.

Series A
Gas-Fired, Steel Air Conditioning Unit

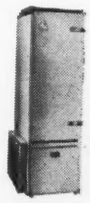


Series G
Gas-Fired, Steel Gravity Furnace



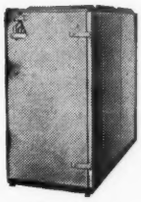
Series H
Gas-Fired, Utility Steel Air Conditioning Unit

Series CA
Gas-Fired, Cast Iron Air Conditioning Unit

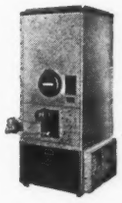


Series CH
Gas-Fired, Cast Iron Utility Air Conditioning Unit

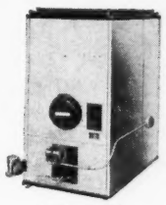
You can't miss, day in and day out with this winning combination.



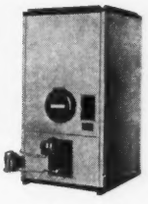
Series O
Oil-Fired, Steel Air Conditioning Unit



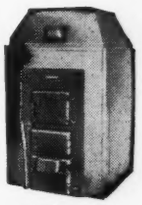
Series VH
Oil-Fired, Steel Utility Air Conditioning Unit



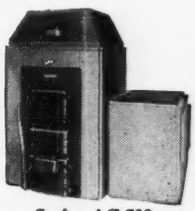
Series VA
Oil-Fired, Steel Air Conditioning Unit



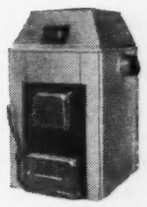
Series VG
Oil-Fired, Steel Gravity Furnace



Series 700
Coal-Fired, Steel Gravity Furnace



Series AC-700
Coal-Fired, Steel Air Conditioning Unit



Series C
Coal-Fired, Cast Gravity Furnace

THE C·A·OLSEN MANUFACTURING COMPANY

Luxaire HEATING & AIR CONDITIONING UNITS

ELYRIA 12, OHIO

Fueloil & oil heat

Says Oil Industry Can Meet Demand for Crude

COL. ERNEST O. THOMPSON, chairman of the Texas Railroad Commission which controls oil production within the state, told the opening session of the International Petroleum Congress at Tulsa, May 18, that the oil industry will meet the demand for crude oil "in an orderly fashion if left unhampered by Government interference." He criticized public impatience because of a "few spot shortages of gasoline and heating oils" and characterized the industry's troubles as growing pains.

The shortages already are being met, he said, by the expenditure of $4,000,000,000 to bring the industry up from five to six million barrels daily capacity.

FHA Starts, Completions At Record High

HOME BUILDING construction figures for the first quarter of 1948, made public by Federal Housing Administration Commissioner Franklin D. Richards, tend to bear out the belief that the current year may prove to be a record twelve-month period. These figures show that more than twice as many new dwelling units were started in the first three months of 1948 under FHA inspection than were started under similar conditions in 1947.

More than four times as many dwelling units, built under FHA inspection, were completed in these first three months than in the same period last year.

The first quarter figures on which these statements are based are:

1. New dwelling construction starts under FHA inspection were 60,432 in 1948 compared with 26,562 in 1947; a gain of 128%.

2. Dwelling units completed under FHA inspection, 51,479 units in 1948 compared with 11,798 in 1947; a gain of 336%.

3. Applications, covering new construction for the first three months of 1948, 178,435 compared with 76,909 in 1947; a gain of 132%.

Newspaper Circulation Divided For Coverage

PIONEERING OF A NEW cooperative advertising technique by more than a score of firms, including oil heating equipment manufacturers, during 1947 has been spotlighted in advertising circles this spring by indications of an expanded use of the plan throughout the heating equipment and other fields.

Already the new cooperative advertising formula, devised by the *Chicago Tribune* and titled the Selective Area advertising plan, has been utilized by the Century Engineering Co., Coleman Lamp and Stove Co., and the Norge division of Borg-Warner Corp. Williams Oil-O-Matic Corp. executives have been studying the new technique which appears to be suitable for use by virtually any manufacturer who distributes products through a selective dealer organization.

By using this formula, an oilheating equipment dealer, in cooperation with a manufacturer and distributor, can purchase exclusive use of that portion of a metropolitan newspaper's circulation within his trading radius at the same milline rates available to advertisers us-

Quality • Dependability
High Performance

Count the RAYTHEON Advantages

...and there's a fourth reason why you see RAYTHEON Transformers on so many of the better oil burner units. The vast resources of the RAYTHEON organization with its unparalleled facilities and experience can provide exactly the transformer you need for your standard models or for new models which you may be developing.

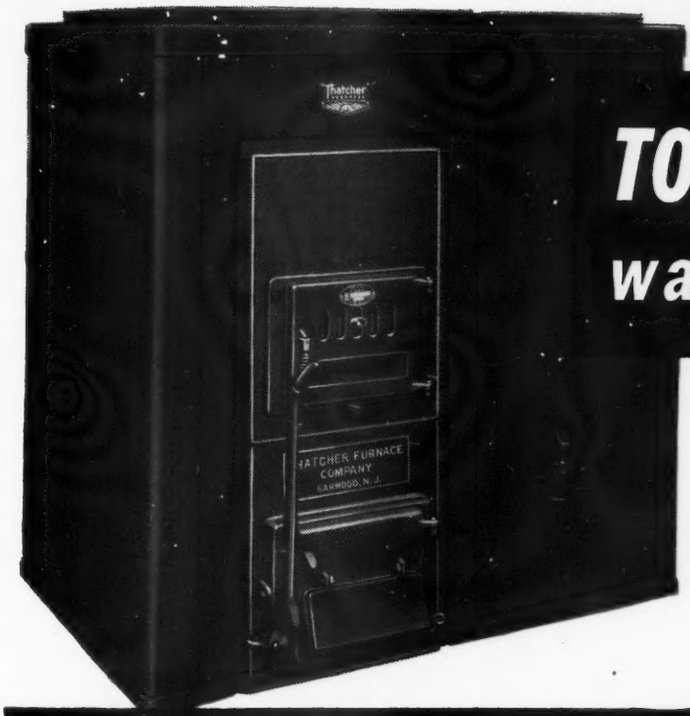
May we make up samples to your exact specifications?

One of a wide range of U. L. approved types

RAYTHEON MANUFACTURING COMPANY
Waltham 54, Massachusetts

Excellence in Electronics

IGNITION TRANSFORMERS



TODAY your prospects want fuel flexibility

NEW Thatcher 481

This all-purpose Winter Air Conditioner designed For COAL — Converts QUICKLY and EASILY to OIL, GAS or STOKER, and operates with high efficiency.

Heating comfort through any fuel emergency! That's what you sell homeowners with Thatcher's NEW Series 481.

Here's the fuel flexibility homeowners want right now. And in the 481, it's backed by Thatcher's 98 years of heating know-how. This unbeatable combination means more sales, more easily. For complete details on the Series 481, write to us today.

Look at these 7 big selling features

- **FULL-SIZE REVERSIBLE BLOWER CABINET** — complete flexibility, install it on either side of the unit.
- **LARGE CAPACITY RUBBER MOUNTED BLOWER** — generous air circulation, more efficient heat transfer, quiet.
- **REPLACEABLE FILTERS** — throwaway type, easy to get at, generous filtering area.
- **HIGH RATIO OF HEATING SURFACE TO GRATE AREA** — delivers extremely high percentage of heat from fuel.
- **MASSIVE FRONT CASTINGS—LARGE DOORS—CAST IRON GRATES** — for long life, easy fire tending.
- **HEAVY GAUGE STEEL HEAT EXCHANGER** — permanently welded into a gas tight compartment.
- **HANDSOME CASTILIAN-RED JACKET** — lined with air-metering inner casing.

Thatcher
FURNACE COMPANY
Specialists in heating Since 1850

GARWOOD, NEW JERSEY

Comfortmaster Oil-Fired Air Conditioner | Comfortmaster Gas-Fired Air Conditioner | Triple-Fire All-Purpose Boiler | Oil Master Automatic Oil-Fired Boiler | Thermaster Gravity Furnace | New 550 Oil-Fired Air Conditioner | New A-204 Oil-Fired Air Conditioner

fuel oil & oil heat

ing total circulation. While other dealers are identified with the same advertisement, no competing dealer within his own trade area participates in the same ad. The Selective Area principle is now being used by many newspapers throughout the country to give dealers exclusive neighborhood coverage.

In using the Selective Area system, a manufacturer, working with advertising agency and newspaper representatives, divides newspaper coverage of each market which is to be included in his campaign into zones which supply circulation packages suitable to his dealer organization. A newspaper circulation of 100,000 might be divided into 10 zones, each providing a circulation of 10,000, or into five zones, each with a circulation of 20,000, depending on the size of the dealer organization.

◈

Steel Shortage Threatens Warm Air Unit Production

ONE OF EVERY FOUR new houses built during 1948 may be uninhabitable upon completion due to a lack of adequate heating equipment. This statement was released by George Boeddener, managing director of the National Warm Air Heating and Air Conditioning Association. Figures are based on the results of a recent survey of manufacturers in the warm air heating industry conducted for the Association by Dun & Bradstreet. The survey included reports from manufacturers of furnaces, pipe and fittings, registers, blowers, controls and filters (all components of gravity and forced warm air heating systems used in single family homes and multi family units).

Direct causes of this situation are the current shortages in supplies of iron and steel which have forced cut-backs in the equipment production of a large number of manufacturers in the industry.

◈

Strong Interest In Power Show Reported

ANNOUNCEMENT has been made that the 18th National Exposition of Power and Mechanical Engineering will be held in Grand Central Palace, New York, November 29 to December 4, during the week of the annual meeting of the American Society of Mechanical Engineers. Coincidentally it is reported that advance reservations of space have been heavy, indicating an exceptionally strong interest on the part of exhibitors. I. E. Moultrop is chairman of the advisory committee of the exposition.

◈

Oil Consumer Tests Night Thermostat Set-Back

WITHIN THE OILHEATING industry there has been some controversy (less in recent years) over whether reducing house temperatures at night actually saves fuel. Tests by University of Illinois and by some burner manufacturers have shown that the savings are appreciable, but it remained for a scientifically minded consumer to break into a large newspaper with results of his testing.

In the February 16 edition of the New York *Daily News*, the world's largest newspaper by quite a margin, appeared a letter from R. E. H. of Plainfield, N. J., in which the principal paragraph was as follows:

"Friends have been wondering whether or not to turn their thermostats down

AVAILABLE Now Shipments
FROM STOCK!
TROUBLE-FREE SERVICE
Dongan Transformers have long been used on leading makes of oil burners. For long life and dependable service, you can't beat a Dongan! Listed as standard by Underwriters' Laboratories.
DONGAN ELECTRIC MFG. CO.
2981 Franklin
Detroit 7, Mich.
The Dongan Line
Since Nineteen-Nine
WRITE FOR LITERATURE
DONGAN
TRANSFORMERS

at night and you might be interested in a two-way test I made this winter with my oilfired hot water heating system. I installed a clock-recording thermometer and an indicating recorder to tell when and for how long the burner ran. Comparison over a considerable period showed that I saved 16% on fuel by setting my thermostat back to 60° at night."

U. S. Department of Labor Fueloil Prices Feb.

FIELD INVESTIGATORS for the Department of Labor monthly check prices of principal fuels in several cities in each section of the country. Getting retail quotations from various supplies in each market, the prices are averaged and published. Those in the table that follow were taken Feb. 15 (cents per gallon):

	Range	*No. 1*	*No. 2*	*No. 3*
Boston	14.13	14.00	12.32	..
Manchester	15.23	14.80	13.08	..
Portland, Me.	14.06	14.08	12.28	..
*Buffalo	15.86	..	13.84	13.84
**New York	..	..	13.90	..
Philadelphia	..	13.50	12.00	..
**Chicago	15.73	15.32	13.36	14.32
***Detroit	..	16.48	15.81	13.08
**Kansas City	..	13.20	12.72	12.89
Minneapolis	15.07	14.83	14.12	14.13
**Baltimore	..	13.36	12.17	..
Norfolk	..	13.40	11.40	11.40
Richmond	..	13.62	11.80	..
Washington	..	13.60	12.50	..
Jacksonville	..	14.83	13.48	..
Savannah	..	16.25	14.33	..
Portland, Ore.	..	13.10	10.80	6.90
San Francisco	..	12.94	10.79	6.62
Seattle	..	13.62	11.45	7.11

*Price includes 1% sales tax.
**Price includes 2% sales tax.
***Price includes 3% sales tax.

Flooring Tests Show Effect of Radiant Heat

EXHAUSTIVE TESTS by the Armstrong Cork Company Research Laboratories indicate that resilient flooring materials for use over radiant heated subfloors can be selected by much the same standards as for over subfloors in rooms where convector-type or conventional heating systems are installed.

Because of the increased popularity of radiant heating in modern homes and buildings, and the resulting demand for

H. C. Little

Licks Catalytic Oil Problem!

New, Exclusive Fuel Saving H. C. Little "CATALYTIC HEAT CONTROL" Enables H. C. Little Burners and Furnaces to Operate on Low Cost Catalytic Oils (Including No. 3 Oil) With:—

1. IMPROVED PERFORMANCE
2. INCREASED CAPACITY
3. EFFICIENT COMBUSTION WITHOUT CARBON
4. SUBSTANTIAL FUEL SAVINGS

Here's what it looks like

On larger H. C. Little Burners, the new Catalytic Heat Control is ON TOP.

On smaller H. C. Little Burners, the new Catalytic Heat Control is INSIDE.

ALSO AVAILABLE FOR MODERNIZATION: The new Catalytic Heat Control, now standard equipment on all factory production, is also available for modernizing existing H. C. Little installations. H. C. Little dealers are now offering these marvelous fuel saving improvements to all their H. C. Little customers.

H. C. Little Burner Company

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Branches in 18 Principal Cities

resilient floor recommendations, the Armstrong Laboratories began conducting a series of continuous tests on the subject over three years ago. Observations were made of all types of resilient floors installed over various types of radiant heated subfloors.

Since the tests showed the effects of varying degrees of temperature on the hardness, composition, and indentation properties of all resilient floorings, Armstrong has been able to make certain specific recommendations as to construction methods for radiant heating installations where resilient flooring is used.

One-inch pipe, spaced 12 inches apart and laid on insulating baffles, was used in the experiments. In this type of installation, the water temperatures were varied from 100° to 115° F. and the general floor temperatures from 80° to 85° F., with the floor areas directly above the pipes 5° to 6° higher. This was found to be satisfactory for the comfort of the room occupants and the service of the resilient flooring. In buildings where greater pipe diameters, wider spacing, or higher water temperatures are to be used, special flooring recommendations may be required and should be obtained from flooring manufacturers. It is imperative, however, that regardless of the system of radiant heating used, the temperature of the floor surface should not exceed 80° to 85° F.

The tests showed that it is desirable to limit water temperatures in radiant heating systems to 120°. Temperatures above this point are uncomfortable underfoot and, in addition, may result in excessive indentation of the resilient flooring, particularly in asphalt tile. While experiments were designed to test resilient flooring under extreme temperature conditions, reports on field installations indicate that, in many cases, constant water temperatures ranging from 85° to 115° are sufficient to maintain comfortable room temperatures.

With radiant heating, as well as with conventional methods of heating, linoleum, Linotile, and rubber tile should be used only on suspended floors or grade-level floors with at least 18-inch, well ventilated air space beneath them. Asphalt tile can be specified also for above-grade installations.

The tests showed that radiant heating normally does not create floor temperatures as hot as those resulting from the direct rays of summer sunlight.

MORE FILTER AREA

with

EDCO Fuel Oil Filter

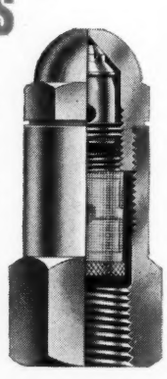
S-252

Sell your customers this inexpensive insurance against costly interruption of service. The exceedingly large filter area in the newly designed EDCO Filter S-252 gives maximum protection to oil burners, space heaters and water heaters using No. 1, 2 or 3 fuel oils. In addition to more filter area, this new filter features *longer cartridge life, sturdy construction, large sump.* It's light in weight to reduce shipping costs and is interchangeable with other makes.

Individually boxed, 24 and 48 to a case.

EDCO Triple-Tested NOZZLES

tops in QUALITY, UNIFORMITY, PERFORMANCE



When you want the best, specify EDCO NOZZLES. They are made of the best grade stainless steel, tested for spray angle, atomization and actual rated capacity, and designed to stay clean longer. Large capacity Monel strainers protect the orifice and slots from plugging.

EDCO NOZZLES are now packaged for safety, convenience and storage. Keep an adequate supply on hand. . . . Order today.

Please give complete information about capacity, spray angle, quantity, etc.

EDDINGTON METAL SPECIALTY CO.

P. O. BOX K, EDDINGTON, PENNA.

Tank Car Deliveries At 2,084 in Four Months

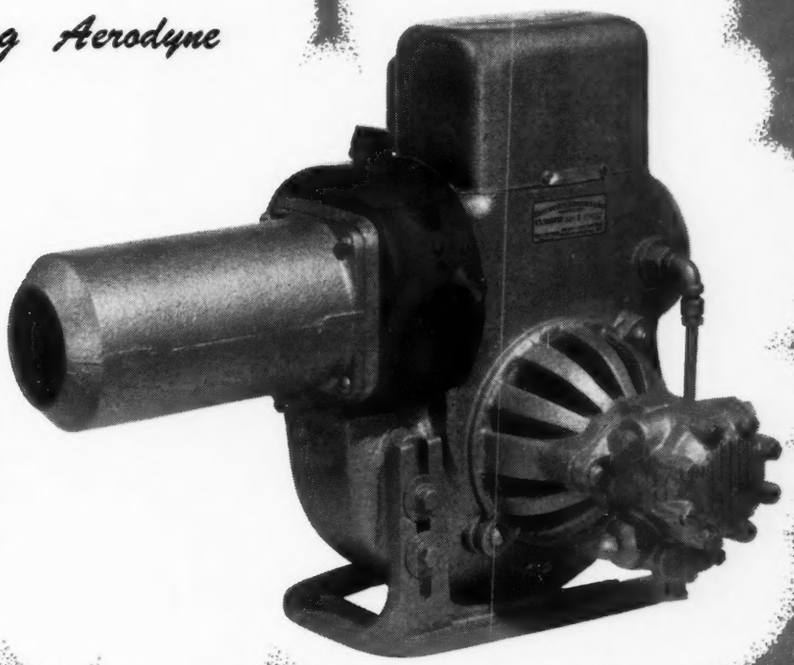
TANK CARS delivered during the first four months of this year were at a rate nearly two and a half times the production rate of last year, according to the American Railway Car Institute. The total through April was 2,084 this year, compared with 852 during the same period in 1947.

"B. J. practically had that buyer signed up at the Club 88 last night, and he's making sure he doesn't lose interest!"

PENN'S ANSWER
TO THE OIL SHORTAGE

How AERO-DYNAMICS Built a New Burner that will Sell EVEN IN 1948!

The Fuel Saving Aerodyne



NO TRICKS . . .
NO GADGETS . . .

BUT AN AMAZING NEW *METHOD* OF MIXING AIR AND OIL! BASED ON THE PRINCIPLES THAT MADE MODERN AVIATION PRACTICAL! BURNS 100% CAT-CRACKED OIL!

There's *never* any shortage of air! And just take air—free air—mix it more efficiently with oil and you get improved atomization that *makes available fuel last longer.* That's why the new PENN AERODYNE will sell even in 1948. It offers not a trick . . . not a gadget . . . but a new *fuel-saving method* of mixing air and oil.

PENN designed this burner for the 1948 market and based its operation on proved principles of aerodynamics. Air is thrown off the fan at an angle that provides freer flow. Air-volume control is provided at the point *where the air spiral* begins—rather than at the point of entrance. The PENN WINDROME AIRVANE—an exclusive feature—moves the flame back and forth to position it for ideal combustion. Tube lengths of 8" to 20" and adjustable leg make this the ideal burner for conversion installations. It will soon be standard equipment on all Packaged Heat Units. We haven't space here for engineering details—but they are available in a new, free bulletin. Write today—get the facts about Aerodyne—the burner based on proved principles of aerodynamics.

PENN BOILER and BURNER MFG. CO.

LANCASTER, PENNSYLVANIA

Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Group's activities to reach the editor by the 20th.

O.H.I. Announces Site For Quarterly Board Meeting

OIL-HEAT INSTITUTE of America, Inc., New York 16, N. Y., announces the completion of arrangements with Wentworth By-The-Sea, Portsmouth, N. H., for the July 13 regular quarterly meeting of the O.H.I. Board. A block of forty double rooms and suites have been reserved for Board members and their wives, for Institute members desiring to attend, and the Trade Press.

There will be several committee meetings on Monday, July 12 for completion of reports to be submitted to the Board the following day. Reservations for rooms should go directly to the Hotel for this annual mid-summer meeting, a three day event beginning July 11.

BETTENDORF BURNERS

Bettendorf oil burners are designed to operate economically in all types of heating plants. The Bettendorf method of controlling air velocity to obtain the correct mixture of air and oil produces a slow-burning flame that delivers the maximum of heating units to your furnace or boiler.

There is a Bettendorf model of burner for every type of home —The model B for the small home, model G for medium-size home —for large buildings the D3 & HD3.

In large and small homes: in heating plants of all types. In coldest weather and in changeable weather the Bettendorf automatic oil burner has established a record of continuous, economical service that insures maximum heating efficiency under every possible heating condition.

BETTENDORF OIL BURNER CO.
MARSHALLTOWN, IOWA

Announce Program For Warm Air Meeting

THE PROGRAM for the Mid-Year Convention of the National Warm Air Heating and Air Conditioning Association, Cleveland 14, Ohio, has been completed tentatively, according to a recent announcement. The two-day session, June 29 and 30, will be held at the Edgewater Beach Hotel, Chicago, with the second day reserved for social activities, featuring a golf tournament.

The opening day's morning session will feature a welcoming address by Atlee Wise, president of the Association, followed by three technical papers. R. W. Roose, special research assistant, University of Illinois, will discuss "Ceiling panel heating versus conventional forced air heating in the new research residence." "The performance of gravity extended plenum heating system in the Small Homes Council research residence" is the title of a paper to be delivered by M. E. Childs, special research assistant, University of Illinois and H. D. Bareither, University of Illinois Instructor, will deliver the final paper, entitled "Floor Slab Construction."

The afternoon session will be highlighted by committee reports, delivered by the following: F. L. Meyer, chairman, Research and Advisory Committee; W. D. Redrup, chairman, Installation Codes and Application Engineering Advisory Committee; Prof. L. G. Miller, chairman, Technical Education Committee; C. L. Rowley, chairman, Publicity and Merchandising Committee. G. A. Voorhees, instructor at the series of Indoor Comfort Conferences being sponsored by the Association, also will speak.

At the luncheon being held on June 29, Fred Smith, executive vice president, Foreman's League, is scheduled to speak on "Management—The Responsibility for Leadership."

MOHA Holds OHI Night And Annual Meeting

THE MAY 18 meeting of the Massachusetts Oil Heating Association, Inc., Watertown 72, Mass., held at the Fox and Hounds Club, Boston, was designated as Oil Heat Institute of New England Night. Speakers were Harold W. Loveren, president of OHI of New England and Fred N. Beckwith, executive

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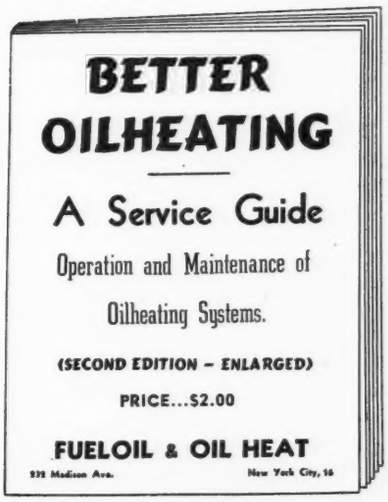
Second



Printing

A USEFUL REPRINT VOLUME OF THE BEST MATERIAL THAT HAS BEEN PRINTED

This collection of articles from Fueloil Journal, Air Conditioning and Oil Heat and from Fueloil & Oil Heat covers trouble shooting, field repair, and efficiency testing to save oil. It is a valuable book for individual study or as a supplementary text for service schools. For all dealers, service and installation men.

TYPICAL CONTENTS:

Fireboxes: First-Rate Fireboxes—Facts about Fireboxes—Hot Flames.

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Controls: Principles of Electric Relays — Motor-Starting Relays — Electrical Test Benches.

Nozzles: Handling Nozzle Trouble—Bench Tests for Nozzles.

Pumps: Handling Oil Pumping Trouble—Service on 2-Stage Pumps—Service on Automatic Valves—Service on Pump Glands.

Baffles: Proper Baffles Save Oil—More Heat per Gallon.

Efficiency: What CO_2 Means—Brass Tacks of Combustion Testing—What? No Instruments?—Know CO_2 from IOU—Five Ways to Figure GPH Rates—Effects of Firing Rate on Cost.

Heating: Shortcuts to Heat Loss Data—It's all in the Venting.

Water Heating: Plenty of Water—Low Cost Hot Water.

Bound in heavy paper cover, 8½" x 11". There are 110 text pages and nearly 140 illustrations besides numbers of tables and short service hints.

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secretary, who discussed, "Meeting the problems of our industry through cooperation."

The meeting also was the annual meeting for Massachusetts Oil Heating Association and witnessed the election of officers. A nominating committee, which had been designated at the April meeting, submitted the following slate: President, Al Coop, Massachusetts Heating Corp., Cambridge; Vice-president, A. L. Dwelley, Automatic Heating Corp. of Mass., Boston; Secretary-treasurer, Fred Heaney, Watertown. Seven members were proposed for the Board of Directors, as follows: Ray Chamberlain, General Heat & Appliance Co.; Les Godwin, General Oil Co.; John Landerman, Gerstein & Cooper; Larry Williams, Scott & Williams; Jack L. O'Sullivan, Metropolitan Oil Co.; Robert N. Sheppard, Cross Coal Co.; Edward E. Pope, Socony Vacuum.

South Carolina Oil Jobbers At Summer and Joint Meetings

IN PLACE of its regular May meeting, members of the South Carolina Oil Jobbers Association were guests of the North Carolina Oil Jobbers Association at a special meeting held at the Hotel Charlotte, Charlotte, N. C., on May 19. After the meeting, Southern Pump and Tank Co. was host at a southern barbecue held at its plant.

On June 9 and 10, the South Carolina group met at Myrtle Beach, S. C., in its regular summer meeting. The first day was given to registration and social gatherings, with business meetings held on the 10th. A banquet, at which Governor J. Strom Thurmond spoke, concluded the meeting. Members of the North Carolina group also attended as guests.

OHOT. Inc. Announces New Slate of Officers

FOLLOWING a meeting of the board of directors, Oil Heat Old Timers, Inc., Long Island City 1, N. Y., announcement was made of the election of Anthony J. Sbare as president for the ensuing year. Officers are selected from board members by the directors, in accordance with the organization's constitution. Albert Zeamans was named vice president; Earle E. Bonn, secretary; H. Vincent Petotto, assistant secretary; Dan Bierman, treasurer and Henry Warnaar, sergeant-at-arms.

In addition to the above-named officers, other directors are: Joseph A. Ross, William J. Brown, John J. Morro, Russell A. Dempsey, E. B. Lipsett, Reuben Lisson, Meredith F. King, J. T. Mitidiere and Gus Burrell.

Steel Boiler Institute Observes 20th Anniversary

THE TWENTIETH ANNIVERSARY of the Steel Boiler Institute, Philadelphia 10, Pa., was observed at its meeting held May 10-11 at Hershey, Pa. Fifty representatives from thirty companies and organizations attended the gathering at which directors were elected. E. I. Boardman, Spencer-Heater Div., was added to the board and re-elected were: L. N. Hunter, National Radiator Co.; J. C. Trefts, Jr., Farrar & Trefts, Inc. and R. A. Locke, president and manager of the Institute. Other directors are: P. K. Addams, Fitzgibbons Boiler Co.; A. E. Jennings, Titusville Iron Works Co.; E. M. Palmer, Kewanee Boiler Corp.; Horace H. Peek, Jr., Lookout Boiler & Mfg. Co.; M. V. Richards, The

. . . FOR GREATER SALES AND PROFITS

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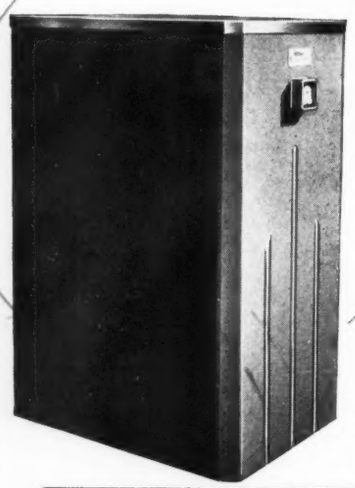
2 in 1 HEATING AND DOMESTIC HOT WATER UNIT



ECONOMY - EFFICIENCY

All combined in this streamlined, green wrinkle finished cabinet boiler-burner unit with handsome chrome trim. High pressure boiler flues. Blanket insulation of 1½ in. rockwool. Heavy stainless steel intensifier tubes, not only serve as baffles but also produce much faster heating with a greatly reduced fuel consumption.

A reliable supply of Domestic Hot Water is furnished thru the Instantaneous Hot Water Coil. This removable "tankless heater" is designed specifically for the

ACME DUAL 8

Equipped with well known gun type burner. . . (flange mounted) and Minneapolis-Honeywell controls

NEW DEALERS WANTED . . . Franchised territories now available for new dealer outlets. Don't delay . . . write today . . . you're money ahead when you feature the easy-to-sell, trouble-free ACME DUAL "8"!

Visit our display at the O.H.I. of New England Exhibit at Hotel Statler, Boston, Mass.—June 7-10 inclusive—Booth 42.

ACME TANK & WELDING
1031 New Britain Ave.
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Please send specifications, prices and franchise details on the ACME DUAL 8.
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City_____ State_____
Name_____

ACME TANK AND WELDING

DIV. THE UNITED TOOL & DIE COMPANY

1031 New Britain Ave., Elmwood (Hartford), Conn.

Brownell Co.; H. B. Steggall, Pacific Steel Boiler Div.

Members present heard reports from L. N. Hunter, chairman, Engineering Committee and P. K. Addams, chairman, Sales and Distribution Committee. Six sub-committees also met during the meeting.

A. E. Hess, managing director, Oil-Heat Institute of America, Inc., addressed the group and urged the promotion of larger storage tanks and more intensive field sales training by manufacturers. F. H. Klein, Orr & Sembower, Inc., newly elected to the board of directors, National Association of Manufacturers, told the group about the purpose and work of the Association and William Ferguson, American Uniform Boiler Law Society, discussed the progress of the Society in advocating passage of boiler bills in various state legislatures. Other speakers were Leigh H. Whitelaw, managing director, Gas Appliance Manufacturers Association, who pointed out the increasing reserves of natural gas in the country and cited the fuel industry as one of the four pivotal industries in the United States; W. W. Brooks, Plumbing and Heating Industries Bureau, whose talk covered a report on steel boiler publicity in newspapers and consumer magazines. Robert Gray, business manager, FUELOIL & OIL HEAT, also a speaker, discussed present conditions in the oilburning industry and pointed to the results of recent studies of consumer opinion as showing conclusively that the majority still prefer automatic oilheat.

More Comfort Conferences Held By Warm Air Assn.

IN FIVE MONTHS of operating this year, twenty successful Indoor Comfort Conferences have been held in various cities by National Warm Air Heating & Air Conditioning Association, Cleveland 14, Ohio. During the month of May, G. A. Voorhees, Association instructor, conducted schools in Denver on May 5, 6, and 7, assisted by local chairman J. H. Singleton, C. A. Crosta, Inc.; Salt Lake City on May 12, 13 and 14, A. R. Dyer, Utah Builders Supply Co., local chairman; and Seattle, Wash., May 24, 25 and 26, R. O. Hardesty, McPherson Furnace Co., local chairman. Scheduled for June 10, 11 and 12 is a school at Billings, Montana.

I-B-R Semi-Annual Meeting In New Jersey On May 13

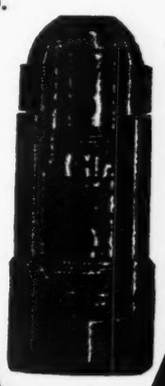
REPRESENTATIVES of twenty-seven manufacturers of cast-iron boilers, radiators and accessory equipment used with hot water and steam heating systems gathered at the semi-annual meeting of the Institute of Boiler and Radiator Manufacturers, New York, N. Y., held at Absecon, N. J., on May 13. Carroll M. Baumgardner, executive vice president, United States Radiator Corp., Detroit, and chairman of the Institute, revealed plans for holding short courses in hot water and steam heating methods. In addition to the Midwestern area short course to be held June 15 to 17 at the University of Illinois, an easern area course is scheduled for July at Virginia Polytechnic Institute.

Members also were told of the success of the Institute's advertising and publicity campaigns, as evidenced by approximately 70,000 requests from consumers for a copy of an I-B-R publication on radiant heating.

TAKE A MONARCH "TIP"-- AND COMPARE RESULTS!

Most any nozzle will produce some kind of a fire, but —until you have tried Monarch Stainless Steel Nozzles (of a type with spray characteristics matched to your air mixing equipment) you won't know how good they really should be. State make of burner and sketch or accurately describe air mixing head and make test *yourself* with the series Monarch Nozzles we recommend.

Pulsation: We can usually suggest a remedy. Give full details of burner and the job.



F-80

Air Cones & Stabilizers

Monarch combinations have been used as original equipment by burner manufacturers for many years and dealers have used thousands of them to make old burners more efficient. Eliminate guesswork—Use tried and tested equipment and be sure of *results*.
Now available for 3½", 3⅞", 4" 4¼", 4½", 4¾", 6" and 8" I.D. air tubes.

Replacement Valves

Monarch piston type pressure regulating and cut-off valves are available in models to suit most replacement needs. G-49 valves can be mounted in any position and piston will not jam from dirt. Contain no bellows or diaphragm to break or corrode.

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Readers' Forum

AIR CONDITIONING AND REFRIGERATION INSTITUTE
Baltimore 1, Md.

Editor:

It was with great interest that I read the article of Mr. J. G. Frost, Superior Engineering Co., Seattle, Wash. (*Mar., pg. 104*) wherein he suggests that a school for oilburner service men be established in this country to train men for this very important industry, which, at this time, certainly is in need of experienced and capable installation and service men.

There is a school of this type now being conducted in Baltimore, Md., by the Air Conditioning and Refrigeration Institute (A.C.R.I.), located at 110-114 N. Paca St. The Institute is approved by the Maryland State Department of Education and certified by the Veterans' Administration.

The course was planned, and is under the supervision of Charles M. Jancar, who is well-known in the industry in the territory for the past twenty-six years. He is assisted by five competent instructors, who also have had long practical experience. The curriculum is very broad and covers every department of oilburner installation and service.

This Institute would be very happy to submit our curriculum and any other information desired to anyone who is interested. D. S. MILLER

RAY OIL BURNER SALES, INC.
New York 7, N. Y.

Editor:

We are writing to call your attention to two proposed laws relating to smoke abatement.

The first of these laws is a local law to amend the Administrative Code of the City of New York regulating the production and emission of smoke from any chimney, smoke stack or other source. This law, which carries Interim No. 453, was introduced by Messrs. Clemente, Quinn and Rager.

In substance, this law seems to set up a smoke abatement engineer and department with certain powers, some of which appear to be arbitrary, and which would cause a hardship to real estate owners.

The second local law is to amend the Administrative Code of the City of New York in relation to dense smoke. This bears Interim No. 462 and was introduced by Messrs. Phillips, McGahan and Rager. This law appears to be much more restrictive and arbitrary and many of the provisions would cause extreme hardship to property owners.

For instance, before any repairs could be done to any boiler or heating equipment, plans would have to be submitted to the Smoke Abatement Engineer and approval obtained. Furthermore, the law provides for permits and fees to be paid for any work done on new or existing heating plants, and an annual inspection, with certain fees, is required for practically all heating plants. Also, it will become mandatory for practically every heating plant to install smoke indicating equipment.

It would seem that the one provision which applies to practically every commercial and industrial heating or power installation, which states that "every furnace or other fuel burning equipment or device shall be subject to annual inspection by the Bureau of Smoke Prevention . . .," would require a tremendous staff which would add considerably

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ALL FROM ONE
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For more than twenty years R & I have specialized in the manufacture of products which assure satisfaction. You reduce telephone, postage, stenographic and bookkeeping time and costs when you get R & I all from one supply house.

R & I Stic-tite Insulating Cement for covering boilers, tanks, fittings, etc.

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R & I Combustion Chambers for any job from 1.25 to 2.50 gals. oil per hour.

R & I Insul-fil Rockwool Insulation for packing between combustion chamber and cast-iron base.

R & I Black Furnace Cement for sealing metal joints and sections of boilers exposed to heat.

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Your supply house has these R & I products.

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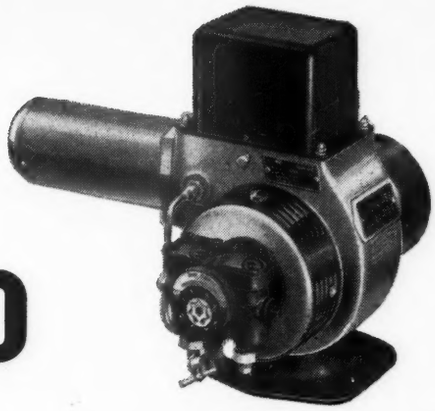

no question about it!

There may be some question about **how many** oil burners you can sell this year . . . but there's no question about **what kind** they should be.

Think of the future. Identify your good name with the name of QUIET MAY . . . good for dependable heating for 25 years.

The dealership in your area may now be available . . . write and see!

MAY OIL BURNER

division of Gerotor May Corp., Balto. 3, Md.

QUIET MAY OIL BURNER

Fuel Conservation Program Offers Opportunity for Fuel and Equipment Dealers in the Fastest Growing Industry

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Combination Screen and Storm Sash

Since Rusco Combination Windows save up to ⅓ in fuel, they are important factors in fuel conservation . . . a problem that is of paramount importance now and in the foreseeable future. Your present customer list is your prospect list for Rusco. Homes, apartment houses and commercial buildings need Rusco Combination Windows. The present period is the ideal time for you to enter this permanently profitable field.

RUSCO—*Leader in the Field*

Besides impressive fuel savings, Rusco Combination Windows offer exclusive year 'round advantages such as: complete self-storage (nothing to change or store), screen, storm sash and weatherproofing in one permanently installed unit, inside fingertip adjustment for rainproof, draft-free, filtered-screen ventilation and many others. Made by the world's largest manufacturers of combination windows—backed by national advertising—Rusco is the recognized leader in the field.

Valuable Franchises Open

The companies to qualify should be well known and respected in their localities—financially responsible and progressive enough to invest capital and time in building a sales organization that will pay handsome dividends. If you meet these qualifications . . . we'll provide the know-how that comes with over 24 years of experience in the home insulation field. Submit trade and bank references—specify whether you are interested in a distributorship, dealership or associate dealership—all inquiries will be held confidential. Write: Mr. Arthur V. Padou, Director of Sales.

The F. C. Russell Company

"Always one step ahead of the weather" with RUSCO

DEPT. 1-U 68
Cleveland 1
Ohio

fuel oil & oil heat

to the City's budget.

The above laws, which at the present time are before the Committee on General Welfare, were published in the City Record on April 15.

M. T. WAY

INSULATION & REFRACTORIES CO.
Williamson, Wayne Co., N. Y.

Editor:

As a frequent advertiser in FUELOIL & OIL HEAT, and a manufacturer of refractories for the oilburner trade, our company is vitally concerned with the many problems facing the industry. For nearly a decade we have made and sold baffles and combustion chambers to the trade. Our distribution covers forty states.

Until 1948 the buying public never has been so disturbed about oil supply. The combination of a severe winter, a shortage of transportation facilities, and a masterly opportunism by solid fuel producers—these factors have served to create a psychosis of fear and doubt in the mind of the average home owner as to future oil supplies.

This mass hysteria can be quieted, we believe, by a frank and factual exposition of the real truths. The nub of the problem, however, is to lay these truths before the American public in a manner which cannot be refuted by any person or organization. The buying public must be reassured, or our whole industry will suffer incalculable harm for years to come.

Since the value of newspapers as a publicity medium is unchallenged, we suggest that a national advertising campaign be devised, underwritten and conducted by all organizations affiliated with the oilburner business. This campaign, of course, should deserve the cooperation of oil producers, burner manufacturers, accessories manufacturers, like ourselves, wholesalers of oilburning equipment, and retailers, as well. These groups could be marshalled by their respective Oil Heat Institutes and similar organizations.

Viewing the entire situation from a national angle, it seems to us that some such concerted action might well be the means of reassuring the home owner as to his future supply of oil at a price per gallon which will compare favorably with any other available fuel.

To be specific, we suggest that every retail dealer, wholesaler and manufacturer of oil fuel, or equipment therefor, be solicited to contribute his share toward a fund for national advertising to counteract and refute the mistaken notion that oil will be a "chancy" fuel this coming season.

A contribution of ½% to 1% of sales, for example, by every company concerned with this situation certainly would not work an undue hardship. The sum realized would be large enough to promote a substantial campaign of education, and would serve to convince the average home owner that oil, as a fuel, is here to stay.

You and we feel sure that fueloil is a dependable means of heating both home and factory. Now it is up to all of us in the industry to sell that idea to the potential buyer of oilheating.

It will cost money—lots of it—but isn't the idea worth trying?

C. H. MILLER

TODAY'S BEST OPPORTUNITY... *Replacement Sales!*

With Johnson's famous oil-saving

BANKHEAT BURNERS

With fuel economy so vitally important, now is the time to replace oil wasting burners with a Bankheat. It's the easiest selling that you can do today . . . selling that will make you a profit, and a new set of satisfied customers.

Bankheat Burners have an unequalled reputation for oil-saving efficiency. In thousands of homes they are powering boilers, boiler burner units and water heaters. For many years in many lands they have been building up a record of economical performance. They're fully automatic, precision built, easy to install, exceptionally dependable. They are today's best bet for dealers who want sales. May we send you the full story?

There's an automatic Johnson Burner for EVERY heating need.

Johnson Oil Burners

S. T. JOHNSON CO.
940 Arlington Ave., Oakland 8, Calif.
401 No. Broad St., Philadelphia 8, Pa.

Builders of fine Oil Burner Equipment since 1903

Manufacturers Activities

Series of Control Meetings Scheduled By Penn Electric

A NEW SERIES of educational shows, sponsored by Penn Electric Switch Co., Goshen, Ind., will commence on June 21 at Spokane, Wash., and will travel to other western cities under the direction of R. H. Luscombe, general sales manager. The show, created to give visual demonstration in the use, construction, installation and servicing of automatic controls, will feature giant controls, which actually operate, colored slides and charts. Each meeting has been designed to give a thorough demonstration of controls, followed by discussions of individual installation problems. After the Spokane meeting, sessions will be held in Seattle on June 24; Portland, Ore., June 29; Sacramento, July 6; San Francisco, July 8; Los Angeles, July 13; Salt Lake City, July 16 and Denver, July 21.

Before the war, Penn pioneered demonstration shows with the objective of improving service to the consumer by education of the service man. The war period made it necessary to discontinue the program and the current series, revivals of the previous meetings, are expected to be even more beneficial.

Arç-Way Boiler Company Occupies Larger Quarters

ARC-WAY STEEL BOILER CO. announces it has occupied new and larger quarters at 20 Ericsson St., Neponset, Dorchester, Mass. The company is producing two sizes of tubular, steel boilers for domestic heating. One model has a rating of 263 sq. ft. of steam, 420 sq. ft. hot water; the larger model develops 360 sq. ft. steam, 576 sq. ft. hot water.

Armstrong Control Making Ignition Transformers

ARMSTRONG CONTROL CO., INC., Portland 2, Ore., is engaged in the manufacture and distribution of oilburner ignition transformers, under license from the France Manufacturing Co., Cleveland, Ohio. Models presently available operate on both 110 and 220 volts, with outputs of 7,500 to 10,000 volts. Armstrong also manufactures transformers with special voltage and frequency characteristics for export.

A replacement service now is in the process of formulation, according to S. MacMurray, general manager, whereby dealers and service men will be able to secure oilburner ignition transformer replacements through local jobbers.

York-Heat Outlines Merchandising Program

AT A MAY 10 meeting held at York, Pa., by York-Shipley, Inc., the Distributors Merchandising Committee outlined a merchandising program for the com-

Red Face Department

In the April issue (page 62) we stole Delavan's flame mirror and the idea of always throwing away dirty nozzles, for another manufacturer. It was another one of those things that can't happen—but did.

For the record, the flame mirror referred to in the Schulz article, and the campaign to get dealers to change nozzles, both are the property of Delavan Engineering Co., Des Moines 9, Iowa.

So sorry!

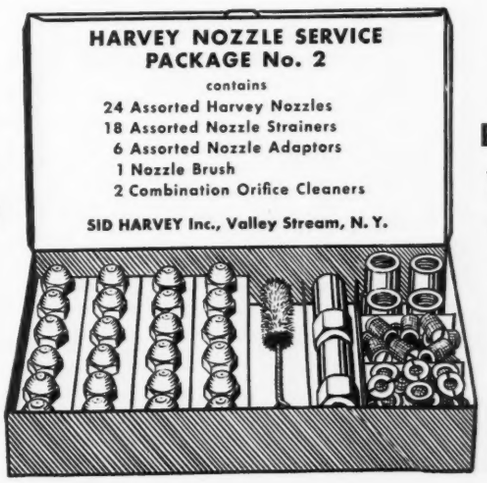
NOZZLES AT NEW LOW PRICES

It's cheaper to install a new nozzle on every "clean up" job than waste time cleaning the old one. There is no change in the famous Harvey nozzles except that they cost less in the popular smaller sizes, and in quantity. They are still made of stainless steel. They still have the accuracy and uniformity that is unsurpassed by any nozzle regardless of price. Standardize on Harvey nozzles for profit and performance.

LARGEST ASSORTMENT ANYWHERE

Harvey nozzles are made in every size from ¾ g.p.h. to 18.00 g.p.h., in every spray angle in both solid and hollow cone patterns, a total of 302 different nozzles. Equip every service car with Harvey nozzles securely packed in the new

HARVEY NOZZLE SERVICE PACKAGE NO. 2 IN NEW FITTED METAL BOX



It's Got Everything You Need To Finish The Job The First Trip

***24 assorted Harvey Nozzles**
18 nozzle strainers
6 assorted Adaptors
1 nozzle brush
and 2 combination Orifice Cleaners for every size from 1.00 to 3.00 gallon size.

TRADE PRICE $24.95

***Your assortment of any size, or angle Harvey solid cone nozzles. The following assortment will be furnished where no choice is given: One each of 1.00, 1.25, 1.35, 1.50, 1.65 and 1.75 sizes in 60° and 80° spray angles; One each of 2.00, 2.25, 2.50 and 3.00 sizes in 45°, 60° and 80° spray angles. If hollow cone nozzles are wanted, add $1.20 to Package price.**

SID HARVEY INC. VALLEY STREAM NEW YORK

IN PHILADELPHIA Sid Harvey of Pa., Inc.
IN BOSTON Sid Harvey of Mass., Inc.
IN NEWARK Sid Harvey of N. J., Inc.
IN WASHINGTON, D. C. Sid Harvey of Md., Inc.

BRANCHES: 138-76 QUEENS BLVD., JAMAICA. 909 MAIN ST., NEW ROCHELLE.

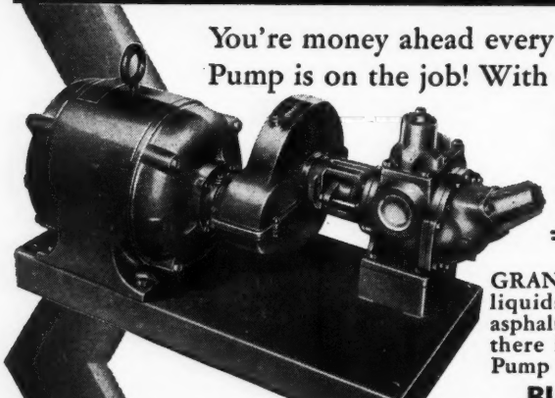
pany's line of oilfired industrial equipment. Distributors present were Frank Sinning, Cleveland; Joe Collins, Buffalo; B. P. Bullman, Boston; Frank Elliott, Philadelphia; Gene Trabilcy, Union City; August Corsini, New York City and Sam Naiman, Elizabeth, N. J. The fueloil situation was discussed in detail and it was decided to participate actively in the program of cooperation with the oil industry.

At a Chicago luncheon meeting held recently for thirty-five distributors, S. H. Shipley, president, revealed an extension of the company's Multiple Management plan, inaugurated last Fall. Committees on management, merchandising and design have been established to consult with York-Heat executives on key problems. Residential distributors' committee chairmen are Harold E. Sweeney, Philadelphia, management; A. O. Frederick, Detroit, merchandising; W. G. Lathrop, Hartford, design. Similar committees represent industrial equipment distributors in the program which calls for at least two meetings of each committee this year.

IN BULK PLANT OPERATION PUMP MORE GALLONS AT LESS COST WITH GRANCO

You're money ahead every minute a GRANCO Pump is on the job! With a GRANCO you get

LOWER INITIAL COST
LOWER MAINTENANCE COST
LOWER OPERATING COST
LONGER TROUBLE FREE LIFE
=LOWER COST PER GALLON



GRANCO Pumps handle any petroleum liquids efficiently, from gasolines to asphalts. Whatever your requirements, there is a quiet, compact GRANCO Pump that will do the job better.

BULK TRANSFER PUMPS

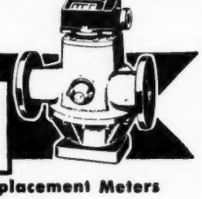
GRANCO PUMPS give unexcelled performance in Bulk Plant or Transfer Station work. High vacuum, high lift. Never need priming at start or finish of loading operations. No "bleeder" lines. Reversible action and four ports fit pump to any pipe hook-up. At left, Model DEES—90 GPM Pump with gear drive in oil-tight housing.

HERE'S WHY GRANCO PUMPS ARE BETTER!

The exclusive, patented ball and squeeze action of the GRANCO spherical rotor—only moving part—provides direct positive expulsion from pump chamber into line of flow. Quiet, friction-free, no contact between rotor and housing—for better performance, longer wear. No gears, blades, scoops, valves or dragging parts.

See your distributor, or write for full particulars. Sales and Service "at your service" throughout the nation.

Granco

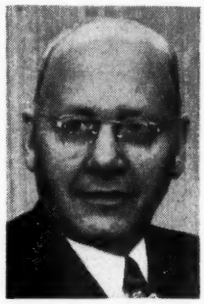


GRANBERG CORPORATION
Oakland 8, California

Also makers of Granco Rotary Positive Displacement Meters

Heil Dealer Opens Enlarged Milwaukee Sales Offices

HEIL AUTOMATIC HEATING, INC., held open house on May 20, 21 and 22 in conjunction with the formal opening of its new sales offices, located at 1829 - 1835 West Center St., Milwaukee 6, Wis. The building contains large general offices, a well-lighted display room and a completely modern organization, equipped to install and service any type of oil-heating system.



G. C. Fillbach

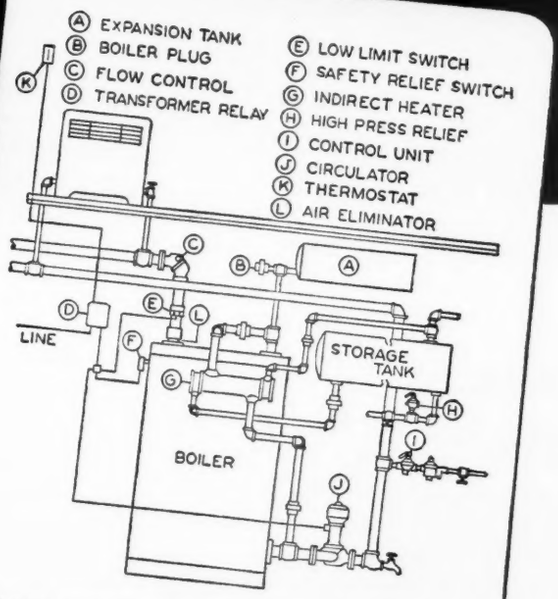
Grover C. Fillbach is president of the outlet, which handles the complete line of oilburning equipment made by the Heil Co., Milwaukee. Harry Moran is sales manager, Fred Murock is superintendent of service, and Harry Gibson supervises installation work. All three have enjoyed long association with the oilburner industry.

Mr. Fillbach, himself, has been connected with the oilburner business since 1926 when he began a three year stint as an oilburner service man. Then followed another three years in oilburner sales and in June, 1932 he was selected as sales manager for the Heil Company's oilburner division. In 1940 he established the first of the Heil local set-ups for sales and service on oilburners in Milwaukee at 2455 N. Teutonia Ave. The business grew steadily since its establishment and finally necessitated the erection of the larger building.

B & G Officials Guests At Aramac Supply Co. Meeting

AT A CINCINNATI, OHIO, meeting, sponsored by Aramac Supply Co., officials and representatives from Bell & Gossett Co., Morton Grove, Ill., were guests. More than two hundred of the city's leading architects, engineers and heating contractors also were present at the meeting, one of a series of educational sessions periodically held by Aramac dealing with various heating subjects. Present from Bell & Gossett were C. E. Pullum, vice president and treasurer; R. E. Moore, vice president and secretary; Frank C. Hackett, sales promotion man-

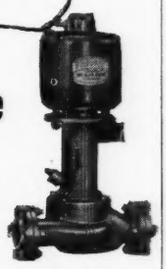
PICTURE OF HOT WATER HEATING AT ITS BEST

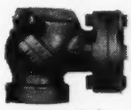


Typical installation diagram of Triplex flow controlled, two-pipe up-feed hot water heating system with indirect domestic hot water.

Ease of Installation and Dependable Operation Make *Triplex* FIRST CHOICE

If you really want to profit from the rapidly growing demand for hot water heating, sell Triplex Flow Control Systems, too. The same Triplex units that assure *hot water at its best* in homes can also be applied to large installations by merely increasing the number or size of individual operating units. Hot water is automatically circulated—abundant heat supplied the radiators instantly, whenever and wherever needed. Thanks to complete standardization, advanced design and precision construction of all Triplex products, installations can be made quickly and easily. Best of all, operation is so trouble-free and dependable that service calls are few and far between. Yes, *Triplex means hot water at its best* . . . for everyone concerned. Push it for conversions as well as new installations. You'll win both ways. Write today for latest catalog.


Direct Drive Circulators


Flow Control Valves

One-Pipe Distributors

Indirect Heaters

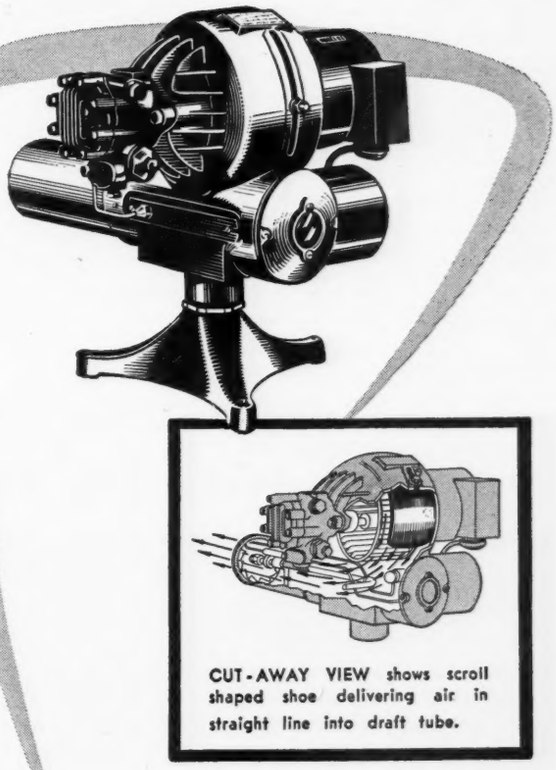
Triplex

HEATING SPECIALTY CO., INC.
PERU, INDIANA

In addition to units illustrated, the Triplex line includes—Direct Drive Horizontal Circulators, Indirect Drive Circulators, Relief and Pressure Reducing Valves, Expansion Tanks, Air Eliminators, Water Mixing Valves, Air Vent Valves, Tankless Heaters, Control Units, Electrical Controls, Barometric Draft Dampers, Sump Pumps.

SEE YOUR WHOLESALER TODAY

Nu-Way


CUT-AWAY VIEW shows scroll shaped shoe delivering air in straight line into draft tube.

with *Patented Air Control* for top efficiency

- **VOLUME OF AIR delivered by blower practically unchanged by change in draft intensity.**
- **REDUCES tendency for flame to pulsate.**
- **AIR NOISE eliminated at unrestricted inlet.**
- **MAXIMUM AIR CAPACITY without eddy currents.**
- **PROVIDES EXCEPTIONALLY ACCURATE air - oil balance.**

You can use Patented Air Control and the many other Nu-Way features to get a big share of the oil burner sales — both replacement and conversion. Nu-Way Oil Burners are backed by 27 years experience and a whole list of powerful sales and advertising helps. WRITE TODAY for new folder containing complete details on the Nu-Way Line of Oil Burning Equipment.

THE **Nu-Way** CORPORATION
Rock Island, Illinois

Sold only through jobbers. Also special applications for furnace and boiler manufacturers.

OIL HEATING EQUIPMENT

AUTOMATIC OIL HEAT EXCLUSIVELY SINCE 1921

ager; Louis Oosten, assistant chief engineer and L. B. Kurtz, district representative.

Mr. Hackett was the principal speaker and discussed forced hot water and service water heating, using slides to illustrate his talk. R. E. Moore supervised the open forum that followed the address.

25th Anniversary Observed By Morrison Products, Inc.

DURING THE MONTH OF APRIL Morrison Products, Inc., Cleveland 10, Ohio, celebrated its 25th Anniversary and issued a brochure to commemorate the event. In the introduction to the brochure, President Hunter Morrison briefly reviews the development of the company and tells of product departmentalization in the fabrication of blower wheels, contract metal stampings and drawn steel wheel guards.

Tribute is paid to production Vice President Hunter Morrison, Jr.; Sales Vice President C. A. Wright and Chief Engineer F. G. Marbach, and views are included of the factory, its departments and products manufactured. Copies of the brochure are available from the company on request.

Sales-making FIGURES FOR FUEL OIL DEALERS

In today's competitive market the dealer needs a sales story that's backed up by convincing facts and figures.

The sales figures on B&W Insulating Firebrick are real "convincers" for the dealer who installs better fireboxes made of B&W I.F.B.

Your prospects know they can't go wrong on fireboxes built with the B&W Refractories that—

1. **Save fuel due to more efficient combustion**
2. **Minimize odor, soot and smoke**
3. **Assure smoother, quieter burning**
4. **Respond quickly to thermostat demands**

And you, Mr. Dealer, can't go wrong on the refractories that minimize maintenance problems and nuisance calls for free-service.

Why not send for your copy of the B&W FIREBOX HANDBOOK? Find out how following the B&W method of firebox construction can lead to more sales for you.

R-299

B&W REFRACTORIES PRODUCTS

B&W 80 FIREBRICK • B&W JUNIOR FIREBRICK
B&W 80 GLASS TANK BLOCKS • B&W INSULATING FIREBRICK
B&W REFRACTORY CASTABLES, PLASTICS AND MORTARS

OTHER B&W PRODUCTS

Stationary & Marine Boilers and Component Equipment
Chemical Recovery Units . . . Seamless & Welded Tubes . . . Pulverizers
Fuel Burning Equipment . . . Pressure Vessels . . . Alloy Castings

BABCOCK & WILCOX

THE BABCOCK & WILCOX CO.
REFRACTORIES DIVISION
GENERAL OFFICES: 85 LIBERTY ST., NEW YORK 6, N.Y.
WORKS: AUGUSTA, GA.

Name Brooklyn Hev-E-Oil Burner Distributor

FRANK M. WYMBS, New York distributor for Hev-E-Oil burners, made by Cleaver-Brooks Co., Milwaukee, Wis., announces appointment of Hev-E-Oil Burner Co. of Brooklyn, Inc., as exclusive distributors for Brooklyn, N. Y. Otto Gleichman is president of the company, located at 1581 Bushwick Ave., which maintains service and installation crews. A complete stock of parts and burners is being carried to accommodate dealers serviced by the company in the Brooklyn area.

Stokol Names McKee Distributor In Ohio

APPOINTMENT by Stokol Stoker Co., Indianapolis, Ind., of McKee Plumbing Supply Co., Cleveland 14, Ohio, recently was announced. The firm operates in twenty-three counties in northeastern and central Ohio and will handle the entire Stokol line, including oilburning equipment for gravity or forced air systems and automatic storage water heaters in 20, 30 and 45 gallon sizes for No. 3 oil. A stock of replacement and service parts also will be maintained.

Peterson Speaks At Bailie Brothers Meeting

A BUFFET DINNER was sponsored on May 12 by Bailie Brothers Supply Co., South Bend 17, Ind. for its organization and dealers. Heating dealers were invited to the gathering, held in the company's own clubrooms.

Among the subjects discussed was the present fueloil supply situation and a talk on oilfired units employing vaporizing burners. Featured speaker was B. A. Peterson, president of B. A. Peterson Co., Dowagiac, Mich., national distributor of the Sanborn air swirler. Mr. Peterson conducted a forum on combustion, nozzles, CO_2 analysis, refractories, burner adjustments and the chemistry of burning oil.

Mueller Furnace Company Receives Brand Names Award

PRESENTATION of a "Certificate of Public Service" to L. J. Mueller Furnace Co., Milwaukee 7, Wis., was a highlight of a meeting of the Brand Names Foundation, held in Milwaukee on April 14. The award honored the company for the ninety-one years its brand name

Books To Help You--

"Basic Service Text for Pressure Type Burners"

This manual has been prepared by G. T. Kaufman, technical secretary of the Oil Heat Institute of America, and is intended for basic training of installers and service men in residential oil-heating. It is also a useful reference source for those who have completed the training courses. Chapter headings include: Oilheating, Oilburner Installation, Tanks and Piping, Pumps-Valves-Strainers, Fans, Nozzles, Motors, Transformers, Ignition Systems, Controls, Boilers, Gravity and Forced Warm Air, Heating Load, Water Heating, Combustion Chambers, Chimneys and Draft, Testing Efficiency, Maintenance, Service Procedures. A good, elementary book. Quiz questions given after each chapter. Pocket size. 216 pages. Paper cover $2.00

Oil Heating Handbook

3d Edition . . . Revised

Famous text by Han A. Kunitz, with complete data on all phases of oilheating. Special chapters describe burner types, methods of installation and service, fueloil and its characteristics. An indispensable guide for sellers, installers, designers of oilheating equipment. Contains hundreds of illustrations, charts, diagrams and graphs. Lists types of service troubles and includes estimating tables. 456 pages. $5.00

1947 Specifications Book of Oilburners and Fueloil

Gives specifications for old and current models offered by more than 450 manufacturers. Repeats data from last edition and adds data on new models. Gives grade of oil specified for each model, method of atomization, oil source, ignition data, oil feed, gph rating and motor size. Also lists data for boiler and furnace burner units offered to show burner capacity in gph, type of burner furnished, ignition and oil specified $1.00

(Bulk prices on request)

Beacon Radiation Reference Book and Heat Loss Guide

Gives right answers quickly. Pocket size. 175 tables show steam and hot water radiation required for every room from 5′ x 5′ to 20′ x 30′ at all normal ceiling heights, and with all corrections and qualifications needed for practical use. Price $3.00

Vaporizing Burner Service

16-page booklet of 4 articles by Frank J. Coonan, veteran Philadelphia service manager, covering practical problems encountered on installation, calibration, adjustment and servicing of vaporizing burners. With illustrations and informative tables. .....50c each

Knowing The A to Z of CO_2

This invaluable booklet shows you how you can test your customers' burners by modern methods obtaining a high CO_2 rating and a low stack temperature. Be efficient and use this up-to-date booklet in your service work $1.00

Because of the thousands of small orders we receive we ask that cash, stamps, money orders or checks be sent with all orders.

Fueloil & Oil Heat

232 Madison Ave. New York 16, N. Y.

NEW!
REVOLUTIONARY!
MODERN!

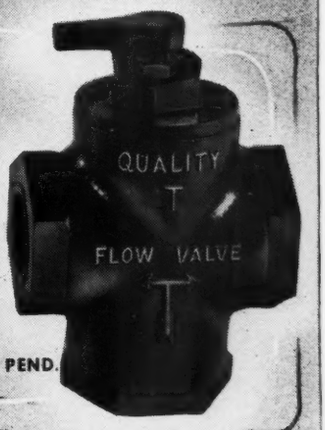
The Only *TWO-DIRECTIONAL*
FLOW CONTROL VALVE
AT NO EXTRA COST

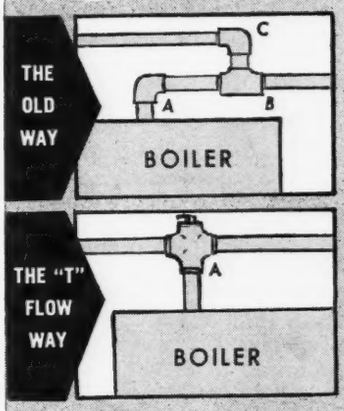
A masterpiece of engineering ingenuity . . . a simple advancement . . . yet essential to all Hot Water Circulating Systems.

- Sizes 1"—1¼"—1½"—2"
- Used also as one-directional flow control valve
- SAVES LABOR
- SAVES TIME

AT NO EXTRA COST

PAT. PEND.





Water circulated from boiler through old "one-directional" flow valve (A), continues to T-Joint (B) and is partially diverted to L-Joint (C) where finally "TWO-DIRECTIONAL" flow is reached. RESULT *. . . unbalanced circulation, more work involved in installations, more piping and fittings needed, greater costs in time and materials.*

Water circulated from boiler to QUALITY *"T" Flow Control Valve (A).* RESULT *. . . immediate "TWO-DIRECTIONAL" flow, balanced circulation, less piping and fittings needed,* LESS *costs in time and materials.*

"SWEAT-ADAPTER" ELIMINATED WITH THE *Bronze . . .*

PAT. PEND.

SWEATFLOW
Control Valve
AT NO EXTRA COST

"Sweatflow" Control Valves are designed especially for direct "sweat" connections with copper tube installations in all Hot Water Circulating Systems . . . without the use of "sweat-adapters." Sizes 1"—1¼"—1½"—2". This is a modern heating advancement developed by the engineers of the Quality Specialty Company, Inc., of Philadelphia.

More architects, builders, engineers and heating contractors are demanding . . . QUALITY "QS" PRODUCTS.

- Automatic Heating Equipment
- Indirect Drive Hot Water Circulators
- Direct-Drive Hot Water Circulators
- Flow Control Valves

SEE YOUR JOBBER OR WRITE DEPT. F-1 FOR INFORMATION

QUALITY SPECIALTY COMPANY, INC.
MANUFACTURERS
211 N. 2nd STREET • PHILA. 6, PA.

"Mueller" has "held public confidence through unfailing integrity, reliable quality and fair prices." H. P. Mueller, president, accepted the certificate.

The Foundation was created to recognize the proven value of brands names in their service to consumers. Only names which have been in continuous use for fifty years or more are eligible.

J & C Rates Furnaces By Laboratory Tests

A NEW LABORATORY has been established by Jackson & Church Co., Saginaw, Mich., manufacturers of a complete line of furnaces for domestic, commercial and industrial applications, with outputs ranging from 50,000 to 3,800,000 Btu/hr.

Prof. Lorin G. Miller, head of the Department of Mechanical Engineering, Michigan State College, Lansing, has been retained to act as a consulting engineer, and it is under his supervision that J & C furnaces are rated by laboratory tests. A series of tests, to which each model is subjected, determines the exact pressure drop through the unit, with and without filters, to provide exact information on the performance capacities of each unit, with characteristic fan data and gives the heating system designer accurate data on pressures remaining for the duct work.

A typical set-up of test apparatus includes a group of calibrated orifices to determine the quantity of air circulated, a separate blower and housing, ducts and dampers to regulate flow and return pressures, manometers and pressure gauges and instruments to indicate speed and power. A second series of tests involves the Btu ratings, considering both combustion and heat transfer efficiency.

Skuttle Counter Display Features No. 600 Unit

A COUNTER DISPLAY, offered by Skuttle Manufacturing Co., Detroit 7, Mich., consists of a five-color fan tail display to be inserted in the recently introduced Series 600 humidifier. The display piece is offered to jobbers and is reported to have proven effective in increasing volume of over-the-counter sales.

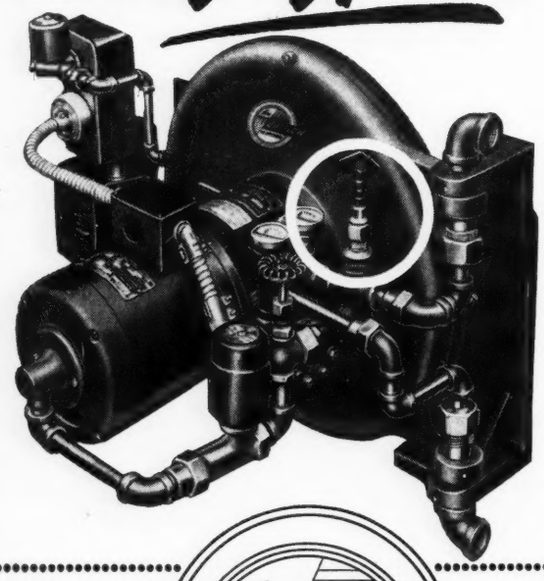
The Series 600 humidifier is a flexible unit which can be applied to gravity or forced air furnaces, with sloping bonnets or straight plenums. It features

Vapoglas humidifying plates and a finger-tip control for flushing and cleaning.

G.E. Personnel Changes Announced at Bloomfield

CHANGES in assignment of three officials have been announced by the Air Conditioning Department, General Electric Co., Bloomfield, N. J. F. C. Kurung has been named manager of manufacturing, automatic heating equipment division, which duties he has assumed in addition to his present duties as manager of general services at the Bloomfield plant. He began his career with G.E. in 1919 as an apprentice and left its employ in

BURN *Any Type Oil* IN THE ACE UNIFLOW BURNER



—Patented Uniflow Oil Valve Assures Uniform Flow and Flame

Regardless of changes in oil temperature or viscosity, the Ace Uniflow Valve permits a constant uniform flow and flame as desired. Heavy residual fuel oils may be burned efficiently under all operating conditions. No matter whether the oil is light or heavy—kerosene or bunker "C"—whether the temperature is 32° F or 180° F, the correct proportioning never varies.

This is just one big feature of the popular Ace Uniflow Oil Burner, custom-made for particular heating requirements.

Send for complete details today.

Capacity Ranges

	GALLONS PER HOUR	BOILER H.P.	SQUARE FEET STEAM RAD.	SQUARE FEET WATER RAD.
MINIMUM	4	12	1,600	2,600
MAXIMUM	165	500	64,000	104,000

Ace UNIFLOW OIL BURNERS

ACE ENGINEERING CO.

1435 W. 15th Street • Chicago, Illinois

Custom Engineered Oil Burning Systems Since 1931

1924. He returned in 1929, and in 1947 joined the Air Conditioning Department as assistant to the manager of manufacturing.

D. W. McLenegan, formerly assistant to the manager of engineering, has been appointed assistant to the manager of marketing, Air Conditioning Department, where he will devote much of time to long range product planning, investigations and special assignments. He has been with the company since 1922 and held various posts in the industrial engineering department. He joined the Air Conditioning Department in 1942.

The third appointment placed S. J. Levine as manager of engineering, Air Conditioning Department, replacing W. E. Johnson, transferred to G.E.'s Nucleonics Department. Mr. Levine joined G.E. in 1928 as a student engineer and became a design engineer on heating units and room coolers in the Air Conditioning Department in 1934.

Metromatic Names Sales Representatives

TWO APPOINTMENTS have been announced by Metromatic Oil Burner Co., Everett 49, Mass. Mart Brook has been designated sales manager of Massachusetts and Robert Pyne, Dover, distributor in the state of New Hampshire.

The company manufactures Metro Pac oilburners and air conditioning units.

Penn Electric Opens Cleveland Sales Office

A SALES OFFICE in the N.B.C. Building, 815 Superior Avenue, Cleveland, has been established by Penn Electric Switch Co., Goshen, Ind.

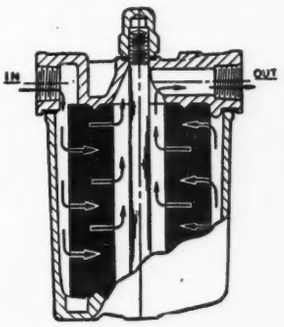
W. S. Lossie has been appointed district manager for the newly established Cleveland territory. He enjoys considerable experience in the control industry and before joining Penn was with Minneapolis-Honeywell as a sales engineer in the Indianapolis territory.

◈

Robert M. Seepe has advanced to the position of manager of hair filter sales, Wilson & Co., Chicago, Ill. He joined the Wilson organization in 1936, heading up a market analysis department and in 1940 became assistant to the vice president in charge of branch house sales. He will be located in Chicago.

One Filter KEEPS INVENTORY DOWN

One model of Cuno MICRO-KLEAN Oil Burner Filter handles all domestic installations. Result—REDUCED INVENTORY.



PERFORMANCE SATISFIES USERS

"Graded Density in Depth" of micronic-fibre cartridge plus resinous impregnation doubles dirt-collecting capacity, eliminates channeling. Result—USER SATISFACTION.

Cuno MICRO-KLEAN Filters and replaceable cartridges are manufactured by the company whose filters are used more often in industry than any other brand. Standard replacement cartridges fit many other oil burner filters already installed.

NEW DISPLAY GETS NEW BUSINESS

Red-blue-and-black counter display, with cut-out for actual product and pocket for sales literature, attracts attention and sells for you. Result—MORE, EASIER SALES.

FOR FREE BULLETIN, ATTACH COUPON TO YOUR LETTERHEAD

CUNO

Fluid Conditioning

Removes More Sizes of Solids from More Types of Fluids

Cuno Engineering Corp.
858 South Vine St., Meriden, Conn.

Please send information on Cuno MICRO-KLEAN Oil Burner Filters and replacement cartridges.

Name .....
Title .....
Company .....
Address .....

D. B. Jones is now northwestern district manager, Heating and Appliance Div., Evans Products Co., Plymouth, Mich., in the territory embracing the lower portion of South Dakota, Nebraska, Iowa, Illinois and Indiana. Mr. Jones, before joining Evans, was with Westinghouse Electric Supply Co. as district appliance manager and appliance superintendent at the Syracuse, N. Y., branch.

Joseph H. Yannette, after a twenty-three year affiliation with Comfort Coal and Lumber Co., Hackensack, N. J. as sales manager, announces establishment of Yannette Fuel and Service Co., Teaneck, N. J. Mr. Yannette plans to accept only 400 customers initially under his first allotment of a million gallons of fueloil. Three tank trucks already have begun deliveries in Teaneck and neighboring communities and burner sales and service departments also are functioning.

Charles R. D'Olive has been named vice-president and general manager of the newly created Ingersoll Utility Unit Division of Borg-Warner Corp. Mr. D'Olive was for many years manager of the appliance division of Stewart-Warner Corp., Chicago, simultaneously serving as Vice President and officers' committee member of the Board of Governors of the National Electrical Manufacturers' Association.

L. W. Moore, general manager of sales and branch houses, Crane Co., Chicago, has been made director of purchases, in one of a number of promotions announced. Taking Mr. Moore's place is *C. T. Pollock,* who advanced from Central district manager. *W. A. Burbine,* Chicago branch manager, became Central district manager and *G. G. Lindholm* succeeded Mr. Burbine. *H. H. Stift,* former manager of branch plumbing and heating sales, replaces Mr. Lindholm as assistant to the manager, Chicago branch.

Lawrence C. Johnson, 36, manager of Minneapolis - Honeywell Regulator Company's branch in Milwaukee, Wis., died April 29 at Northwestern Hospital, Minneapolis, after a short illness. He had been with Honeywell since 1928, in the home office, the New York and St. Louis branches. Surviving are his widow, Mrs. Bonnieann Johnson; his father, a sister and a brother.

A. C. Fischofer and *A. R. Martin* recently were appointed assistant managers of the northern and southern sales regions, respectively, Esso Standard Oil Co., New York 19, N. Y. Other appointments saw *D. L. Barrett* named manager, bulk sales division, which will include his present responsibility as head of fueloil sales; *J. A. Knowlton* became manager of the cost and operations division; *W. R. Stott,* manager, New Jersey sales division. *B. F. Shea* succeeded Mr. Knowlton as assistant manager, New England division; *J. F. Dixon* replaced Mr. Stott as assistant manager, New Jersey sales division.

William H. Haag has been named works manager, Perfection Stove Co., Cleveland, Ohio. He joined Perfection Stove in 1928 and for several years was production manager of the Platt Avenue and Ivanhoe Road plants.

Paul Garrett, vice-president of General Motors Corporation, was elected a director of United States Radiator Corporation at the annual meeting of stockholders. All other directors were re-elected.

MD OIL BURNER MOTORS MD

Specially Designed for Oil Burner Use

NO STARTING SWITCH TROUBLES

LIGHT WEIGHT • CONTROLLED LUBRICATION

Such material as steel and copper may be allocated soon

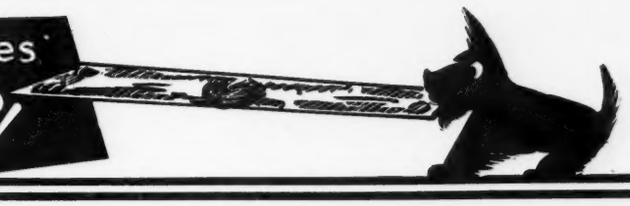
We urge you to order motors now for later delivery

Write for details, attention Vincent K. Smith

ELECTRIC MOTOR DEVELOPMENT COMPANY

WICKLIFFE • OHIO

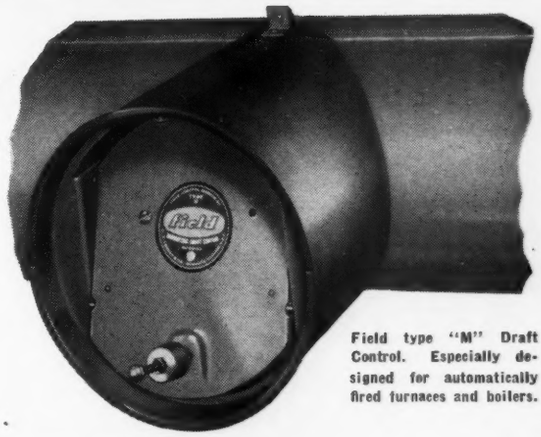
"Scotty Field" Stretches FUEL DOLLARS Further!



These SAVINGS MEAN SALES for the . . .

Fuel economy and heat saving are important to today's home owner! Field automatic, barometric draft controls give fuel economy and save heat!

That's why dealers find it profitable and easy to sell the durable, efficient Field barometric draft control, "The Best for the Finest" in heating equipment.



Field type "M" Draft Control. Especially designed for automatically fired furnaces and boilers.

CONTROLLED DRAFT BY Field

FIELD CONTROL DIVISION

H. D. CONKEY & COMPANY MENDOTA, ILLINOIS

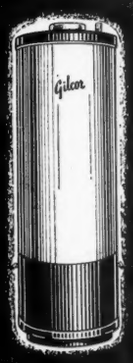
AFFILIATES: CONCO MATERIALS HANDLING DIVISION — CRANES—HOISTS

field REGISTERED

BAROMETRIC DRAFT CONTROLS

AFFILIATES: CONCO BUILDING PRODUCTS, INC. — BRICK—TILE—STONE

You get more with Gilcor — A BETTER PRODUCT

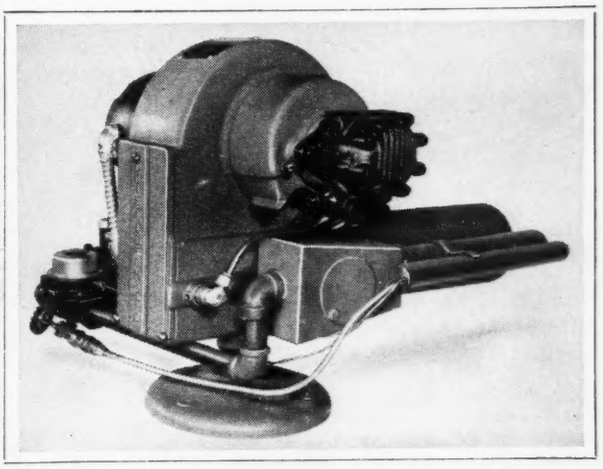


OIL BURNING
WATER HEATERS
FLOOR FURNACES
AIR CONDITIONING FURNACES

DESIGNED TO Sell... PROFITABLY

GILCOR PRODUCTS CORPORATION
DOWAGIAC, MICHIGAN

QUIET AUTOMATIC Dual-Heat* Combination GAS or OIL BURNER



For heating with either fuel oil or artificial or natural gas

QUIET AUTOMATIC OIL BURNER

QUIET AUTOMATIC BURNER CORP.
NEWARK 4, N. J.

*Trademark Reg. Pats. Pend.

DEALER OPPORTUNITY

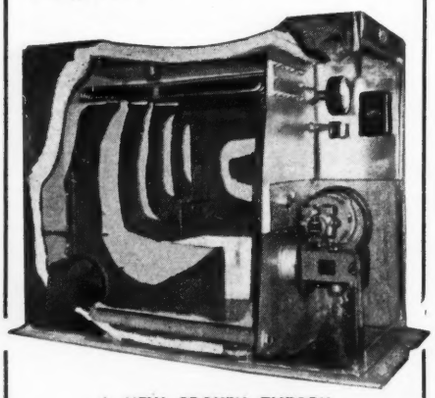
We have openings for a limited number of dealers

ACT FAST— ACT NOW — HURRY —

SEE WHY

RADIANT GLOW OIL HEAT

is a better buy. With its Radiant transfer surface — counter flow principle — down fired — all steel — wet base boiler — built-in heat exchanger — instantaneous hot water coil — expansion tank built in — burner completely enclosed with extended jacket — low compact modern design — low operating cost.



A NEW PROVEN THEORY OF HEAT TRANSFER

NO TUBES — NO FLUES JUST RADIANT HEAT

Can any other boiler burner unit offer all the advantages incorporated in Radiant Glow?

Get all the facts about Radiant Glow Franchise today. A limited number of valuable territories still open. This is an opportunity any live wire organization can not afford to let pass by.

Invite our representative to call. Let him tell you of the advantages Radiant Glow oil heat and an exclusive franchise has to offer.

CLIP AND MAIL

LEHIGH VALLEY SERVICE CO.
20 South Sixth St., Allentown, Pa.

Please send me literature on your oil burners—at no obligation to me.

NAME .....

STREET .....CITY.....

Edward T. Nahill has assumed the duties of manager, Heating Div., Comfort Products, Inc., Philadelphia, Pa. He formerly was eastern division manager for York-Shipley and before that was with General Electric and Brown Instrument Co. Comfort Products distributes the complete Mueller Climatrol line of winter air conditioning units, conversion burners and summer air conditioning units in southeastern Pennsylvania, Delaware and southern New Jersey.

James C. Martell, vice president, has been placed in charge of operations of Coastal Oil Co., Newark, N. J. He joined Coastal in June 1947 and became vice president last March. In his new capacity, Mr. Martell will be in charge of all company plants, product handling, sales and customer relations. His experience in the petroleum industry spans a period of more than twenty years in marketing and transportation.

Louis E. Arnold has been retained by Nu-Way Corp., Rock Island, Ill., in charge of research and development. He will be in charge of research and scientific work on oilheating equipment, including testing and adapting burners as required for all types of furnaces. Mr. Arnold has had twenty years' experience in the industry, working on the development of vaporizing, low and high pressure type oilburners. He is a holder of several patents on oilheating equipment.

A. B. MacLaren has advanced to the position of assistant sales manager, furnace division, Perfection Stove Co., Cleveland, Ohio. In his new post he will concentrate on developing the Superfex furnace line. Mr. MacLaren has been with Perfection since 1940, when he joined the organization as a sales engineer. In 1931, when the furnace sales division was formed, he joined it, later became its service manager.

Edward R. Zieve has been appointed an instructor in heating in the Refrigeration, Heating and Air Conditioning Institute of the Milwaukee School of Engineering, Karl O. Werwath, vice-president of the school, has announced. Formerly assistant manager of the air conditioning department of the Clarage Fan Co., Kalamazoo, Mich., Zieve received a Master of Science degree in heating, ventilating and air conditioning from the University of Illinois in 1947. He served as a wartime navy officer.

Elmore T. Scheck has rejoined the L. J. Mueller Furnace Co., Milwaukee, Wis., and has been designated its Milwaukee sales manager. In addition to supervising all sales and sales personnel in Milwaukee, city and county, he also will be in charge of local service activities. Mr. Scheck has been with Mueller for more than twenty years and has been active in the sales, service, traffic and claims departments.

M. W. Crew recently announced the formation of Crew Engineering Corp., Milwaukee, Wis., specializing in mechanical design and product development. Mr. Crew formerly was manager, industrial controls division, Perfex Corp.

Gordon Duke has resigned as chairman of the board, Southeastern Oil, Inc., New York 17, N. Y., and has transferred his residence to Mexico City. The move enables Mr. Duke to devote his full time to Southeastern's affiliate in Mexico, of which he is president.

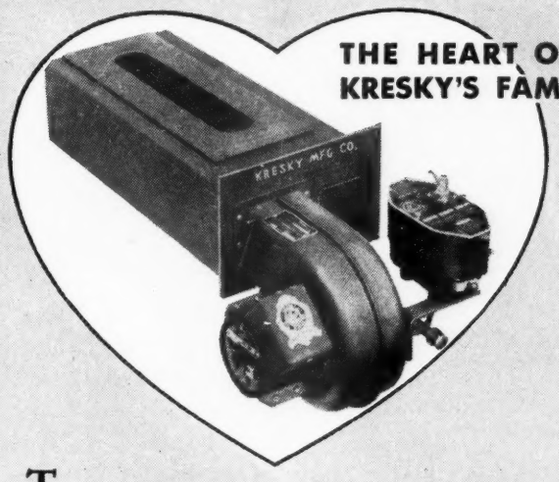
O. H. Larimer has been promoted to the position of sales manager, range and heater division, Perfection Stove Co., Cleveland, Ohio. He replaces Frank A. Gabriel, retired. Mr. Larimer first became associated with Perfection in 1918 as a salesman and from 1920 to 1944 served as manager in the Kansas City district. Since 1944 he has been assistant sales manager, cook stove and heater division.

YES— Kresky OIL BURNERS

The Best Known Name in Oil Heating MEANS...

Leadership in Sales and PROFITS FOR YOU!

For two generations, the *familiar* name in oil heating equipment has been *Kresky*. Today, thousands and thousands of satisfied users throughout the country swear by Kresky for every heating need. That reputation means *immediate* customer acceptance...more sales ...more quickly... for you. More net profit from every sale, too. Kresky's trouble-free operation almost eliminates expensive service calls. And customer satisfaction means repeats sales of other Kresky units.



The famous patented Kresky burner is the basic unit in all models. Simplicity itself in design, the Kresky inducts air into the oil flame in just-right amounts to give clean, quick, *hot* heat when you want it. Soot-free . . . trouble-free . . . that's Kresky, the all-year line for all-year profits. The Kresky line includes floor furnaces, dual wall furnaces, water heaters, basement furnaces and conversion burners for all types of ranges, home or commercial.

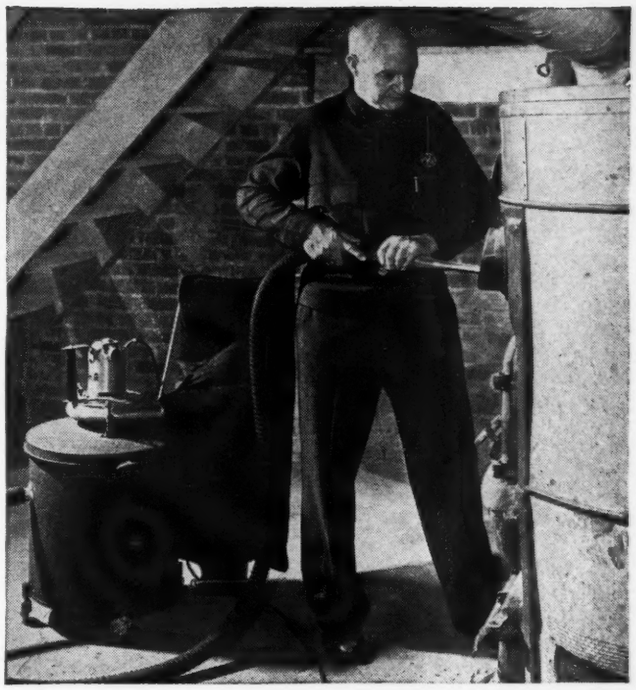
Valuable dealerships may be available in your territory. Write for full information . . .

Listed by Underwriters' Laboratories, Inc.

Write for illustrated folder

KRESKY MFG. CO., INC.

Petaluma, California



Clean furnaces quickly—easily—thoroughly!

Check the advantages of the General Electric Furnace and Boiler Cleaner

● The new General Electric Furnace Cleaner can do a thoroughly efficient job on any furnace.

This timesaving furnace cleaner has a powerful suction action that quickly removes soot and scale from furnace interiors. It's so fast, so efficient that you can clean many furnaces a day. That means more profits for you!

It's simply constructed, light in weight. One man can operate it with *no previous training.*

General Electric backs this machine with the company warranty, and provides all special tools and accessories. For further details, mail coupon below. General Electric Company, Bridgeport 2, Connecticut.

FAST • EFFICIENT • QUIET • ECONOMICAL

The New General Electric

Commercial Vacuum Cleaner

GENERAL ELECTRIC

A & M Department, Section 145, General Electric Company, Bridgeport 2, Conn.

Send descriptive literature concerning

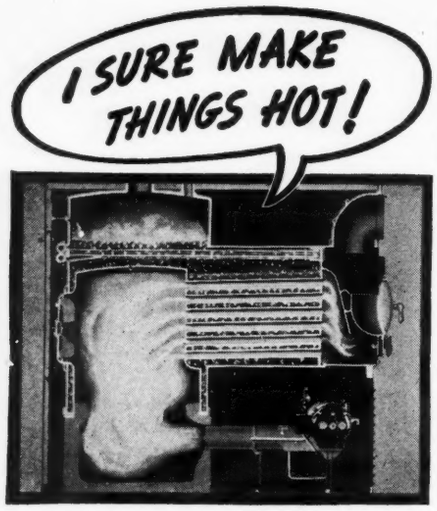
( ) Wet and Dry Pickup Vacuum Cleaner
( ) Furnace and Boiler Cleaner

Name.....

Firm.....

Address.....

City.....**State**.....



Make sure that combustion chambers will not develop leaks or cracks by sealing them with Rutland Retort Cement.

Rutland Retort Cement is ideally suited for bonding fire-brick. Soft enough to work easily, but has enough body to be efficient. Economical to use, because it has more bulk than many other cements.

4 Other Rutland Products That Save Time and Trouble

Rutland Furnace Cement—For making joints smoke-tight and gas-tight when installing or resetting hot air furnaces and oil burning equipment. Provides 10 to 15% more bulk than many cements and does not fall or crumble as metal heats and cools.

Rutland Asphalt Paint—Genuine Gilsonite Asphalt base. Easy to apply. High heat-resisting qualities. Dries in about 4 hours.

Rutland Pipe Joint Cement—Seals joints tightly. Lasts indefinitely. Never becomes so hard that pipes cannot be disjoined easily.

Rutland Concrete Patcher—For repairing cellar walls and floors. Easy to use; just mix with water.

FREE Booklets Every Heating Expert should Have—Clip Coupon Today.

RUTLAND FIRE CLAY CO. FO-3
RUTLAND, VT.

Please send—free—your booklets on Rutland products for the heating expert.

Firm Name .....

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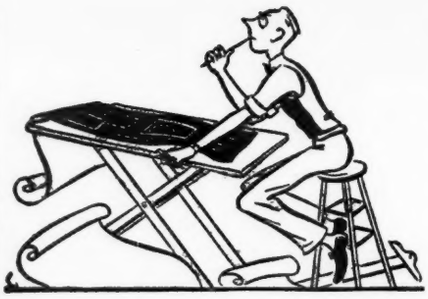
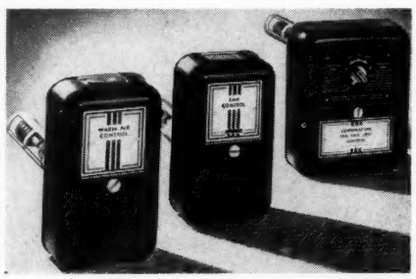


New Products

Perfex New Thermostat, Fan and Limit Controls

DEVELOPMENT of a new Magic Dial room thermostat, series 165, permitting easier temperature settings and quick adjustment for individual heating sys-



tem characteristics, has been announced by Perfex Corp., Milwaukee, Wis. It is designed to operate with the full line of Perfex primary controls, or with other makes requiring a two-wire, snap-acting thermostat. Temperature and cycling adjustments are made on twin dials surmounting the die-cast thermostat case. Cycling adjustments provide for a range from short to long "on" periods. A feature of the control is its separable mounting plate which serves as the wiring terminal. Twin contact switch is completely enclosed.

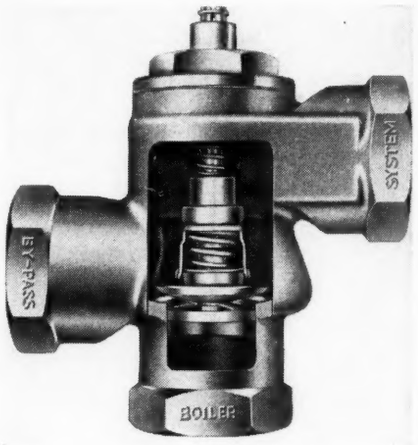
The thermostat was announced coincident with introduction of Perfex's new warm air limit control, series 404; fan control, series 454 and combination fan and limit control, series 474. Each features simplified design and completely enclosed twin contact switches to eliminate contact failure and interference from dust, grease, lint and other foreign matter. All three controls are designed in a smaller, more compact size and employ a bimetallic helix. Temperature range of combniation fan and limit control is suitable for constant air circulation requirements, and the control can be used with low or line voltage, or combination of either.

Models B6 and B4 Fulflo Oil Filters

ON PAGE 126 of our April issue there appeared an editorial announcement of a new Fulflo filter, made by Commercial Filters Corp., Boston 27, Mass. The description of the filter was not completely correct. The B6 filter, described, employs a 6" filter tube and the B4 uses a 4" filter tube. The latter model is recommended for smaller homes, and for use with space heaters, ranges and similar applications. Both have been adapted especially for heating oils in pressure and gravity type oilburners.

Taco Paneltrol Valve Serves Dual Functions

PANELTROL valve, developed by Taco Heaters, Inc., Providence 3, R. I., for panel heating systems performs a dual function. First, it can be adjusted to deliver water to radiant heating panels at any temperature between 110° and 150° F., provided boiler water tempera-



tures are higher than these settings; and second, it permits the same boiler to furnish domestic hot service water supply by carrying boiler water temperatures at 180° F. or higher, if necessary.

Heart of the Paneltrol is a patented thermostatic element, designed to eliminated fatigue or corrosion. Operation of the system is controlled by an ordinary room thermostat.

Dwyer Draft Gauge Doubles As Spirit Level

VISI-DRAFT gauges, by addition of a new feature, have become a two-in-one instrument, it is announced by F. W. Dwyer Mfg. Co., Chicago. To the transparent draft gauge has been added a circular spirit level so that it is possible to use the instrument to line up burners

KRAISSL

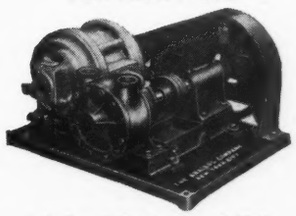
PUMPS AND SEPARATORS

FOR OIL BURNER SERVICE

CLASS 50 LIGHT OIL PUMPS
DIRECT DRIVE FOR
#1 TO #5 OILS INCLUSIVE

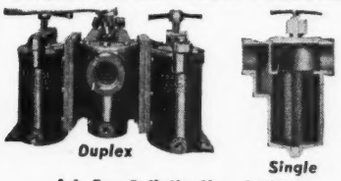
Ask For Bulletin A-1330

CLASS 60 HEAVY OIL PUMPS
REDUCTION DRIVE
FOR HEAVY OIL



Ask For Bulletin No. A-1193

CLASS 72 STRAINERS AND FILTERS
SINGLE AND DUPLEX
QUICK CLEANING
STANDARD AND HIGH PRESSURE



Duplex *Single*

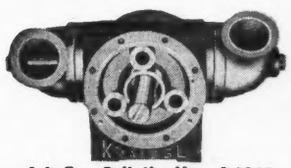
Ask For Bulletin No. A-1214

FOR BULK STATION SERVICE

CLASS 60M MOTORED PUMPS
DIRECT DRIVE
FOR EXCLUSIVE USE WITH
LIGHT OILS AND SOLVENTS

Ask For Bulletin No. A-1267

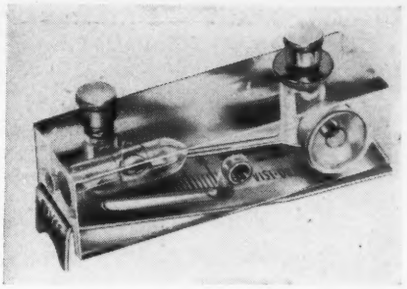
CLASS 80 TRI-ROL PUMPS
INTERCHANGEABLE SERVICE
BOTH LIGHT AND HEAVY OILS
TANK TRUCK AND BULK STATION



Ask For Bulletin No. A-1366

295 WILLIAMS AVE.

KRAISSL **THE KRAISSL COMPANY**
HACKENSACK, N. J.



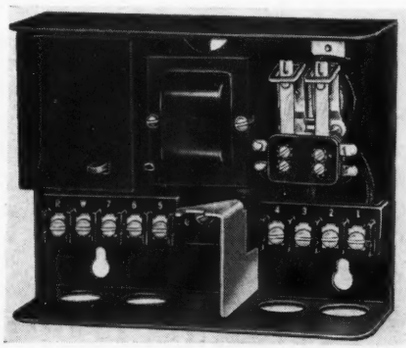
and control valves in level position, and secure accurate draft measurements for setting draft controls.

The Visi-Draft is small enough to fit into the hand, permitting its use as a level in small spaces. Both direction and amount of levelling can be found in one reading. The level is 5/8" in diameter and indicates 1° out of level with each 1/10" bubble movement. Unbreakable crystal clear plastic is used throughout the instrument, with the exception of the levelling bubbles. Draft calibrations are graduated in .01" divisions.

White-Rodgers Series 600 Oilburner Primary Controls

SERIES 600 controls, recently introduced by White-Rodgers Electric Co., St. Louis 6, Mo., have been designed to provide automatic control and safe operation of any gun or rotary domestic or small industrial type oilburner. Available in types for either intermittent or continuous ignition, the controls have a safety switch timing period of approximately 60 seconds and require manual reset in event of safety shutdown. Controls of one-piece construction embody the combustion switch, safety switches and relay in one case. Available also is two-piece construction, wherein the primary control and combustion switch are separate units to permit greater flexibility of installation.

A scavenger period of approximately 60 seconds follows every normal cycle and any abnormal burner shutdown. Controls recycle on power or flame fail-



Don't sell heating equipment alone...

Sell PROTECTION
against fuel shortages

Sell ECONOMY
in cost and operation

Sell Fiske ALL FUEL Furnaces
with the sensational 15-minute change-over feature for oil OR coal!

Now you can close those hard-to-crack prospects who want automatic heat—but are hesitating because of fuel scarcities. Get the facts about this and other money-makers in the complete FISKE LINE of Oil and Gas Home Heating Equipment.

Exclusive Fiske Franchise gives you year-round LOCAL ADVERTISING over your firm name AT ABSOLUTELY NO COST TO YOU. No large unbalanced inventory required. Stock only WHAT you need WHEN you need it! Send coupon for complete details TODAY.

FISKE PRODUCTS, INC.
Mt. Kisco, New York
Please send full information on Fiske Dealer Franchise and the Fiske Line.

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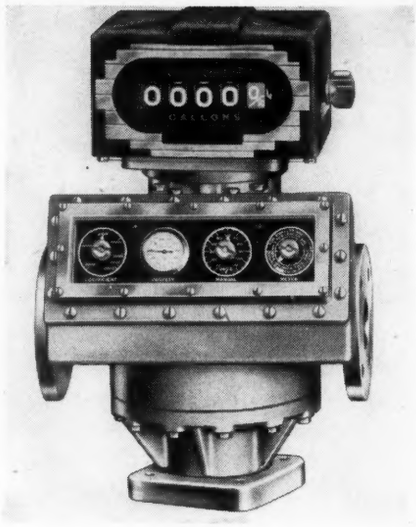
ure, after scavenger period. A new type of heat sensitive element eliminates the use of a clutch or other mechanism to obtain rapid response to temperature changes, and safety switches are compensated for varying basement temperatures. Electrical ratings of the controls reveal an input of 115 volts, 60 cycle.

New Granco Meter Is Temperature Compensating

A METER, developed by Granberg Corp., Oakland, Cal., is announced as a fully automatic temperature compensating meter for petroleum products. It is adaptable to all liquids within a range of .003 to .009 coefficient of expansion, compensating for temperatures or fluctuations in a liquid from 0° to 220° F. The temperature attachment is an integral part of the meter and can be set at the factory to accommodate a specified liquid. Changeovers are made readily by moving a dial to the coefficient of expansion of the liquid to be handled.

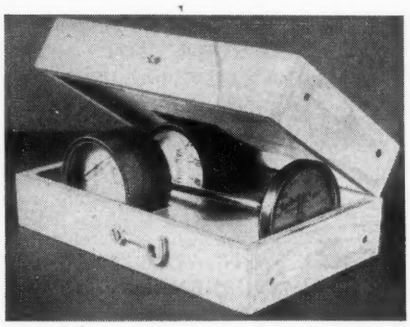
Granco rotary meters are available with the temperature attachment in sizes up to 900 gpm. Where desired a manual temperature correction dial can



be moved to correspond with the thermometer dial so that the meter measures by straight gallon displacement.

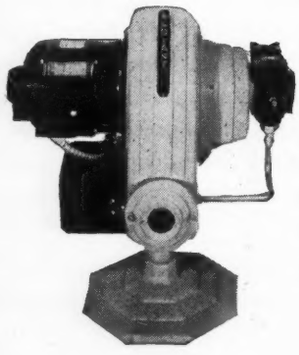
Rochester Offers Two Oilburner Test Kits

TWO MODELS of oilburner test kits are available from Rochester Mfg. Co., 10, N. Y., to check pump efficiencies and stack temperatures. Model 0500 kit, designed for testing pump efficiency only, is furnished in a wooden carrying case and consists of a No. 2450 pressure gauge and No. 2450 vacuum gauge. Pressure gauge has a range from 0 to 200 lbs., with a 2" white dial with black numerals. Vacuum gauge measures from 0 to 30", also with a 2" white dial and black numerals.



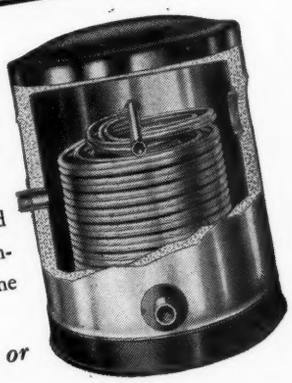
Model 0501 test kit, in addition to pressure and vacuum gauges, includes a No. 1596-C9 stack temperature thermometer. Uniform with the other instruments, it furnishes temperature readings from 200° to 1000° F. on a 2" circular dial. Its stainless steel bulb is 3½" long and the thermometer will mount in a 5/16" diameter hole. All instruments are designed for heavy-duty service, with moving parts made of wear-resistant

BURN CATALYTIC OILS EASILY
with NO SOOT and NO TROUBLE!
Sell and install the New, Improved
RADIANT
• OIL BURNER •



4 sizes . . . 1 to 20 gph
Low in Cost . . . Dependable . . . A profit-maker for dealers . . . easy to service because it was designed to reduce service costs and increase efficiencies.
"YOUR FUTURE IS BRIGHT WITH RADIANT!"
Literature on Request.
RADIANT UTILITIES CORP.
1859 Cropsey Ave. Brooklyn 14, N. Y.

In a
CLASS OF ITS OWN!
Imitated? . . . Yes—but the ALL-COPPER Tankless Heater originated by G&C can't be duplicated—has never been equalled—is still the *only* one of its kind!
Now furnished either in polished Copper without insulation—or insulated and jacketed in two-tone baked enamelled steel shell.
Contact your jobber now or write to us.



THE HOUSE OF HIGH GRADE COPPER PRODUCTS
Manufacturers of large Tankless Heaters and Hot Water Storage Generators for commercial installations.
GERSTEIN & COOPER, CO.
1-3 WEST 3RD STREET • SOUTH BOSTON, MASS.

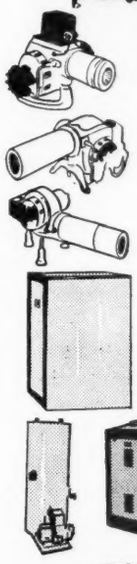
IMITATED...BUT NEVER DUPLICATED

Like the proverbial "Monkey sees, monkey does" our famous AT-A-GLANCE tank gauges have many imitators. You can rest assured however, that for guaranteed quality and lasting satisfaction, there is nothing on the market quite like our original. Be sure — before you buy. Write for literature and descriptive details of important features.

On Guard 24 hours a Day!

KRUEGER *Sentry* GAUGES

GREEN BAY • WISCONSIN



THE NEW P. C. OIL BURNER

ADDED TO AMERICA'S MOST COMPLETE LINE OF OIL HEAT EQUIPMENT IS GIVING DEALERS ALL OVER THE COUNTRY THAT MUCH NEEDED EXTRA SALES OPENER! . . . . . .

Get the facts today about the amazing fuel saving P.C. (precision combustor) oil burner.

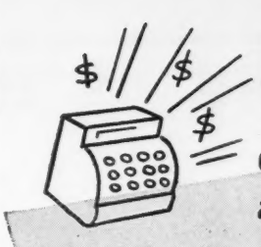
GENERAL *Automatic*

EST. 1924

Check FIRST . . . . . with the FINEST

GENERAL OIL BURNER CORP.
2300 Sinclair Lane, Baltimore 13, Md.

fuel oil & oil heat

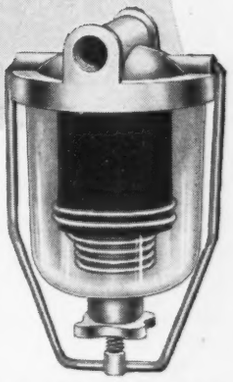


CASH IN

on "Chemistone" an exclusive feature of

Klemm

FUEL OIL FILTERS
For Boilers
Space Heaters • Ranges



Only Klemm Filters have CHEMISTONE—the original controlled porosity element. *It's a powerful salesmaker!* Stop preventable burner failures. Install Klemm Filters . . . They trap dirt, sediment, water, etc. All customers need this protection for uninterrupted heating comfort. You profit on every sale.

Liberal discounts to dealers.
Write today for full information.

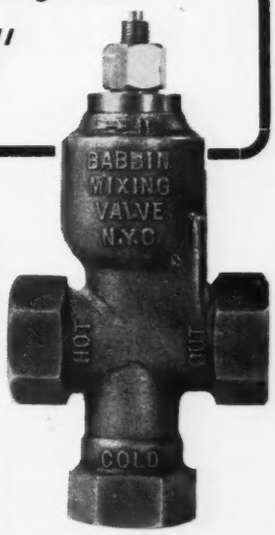
Klemm

AUTOMOTIVE PRODUCTS COMPANY
1718 N. Damen Avenue **Chicago 47, Illinois**
Export Division: **Guiterman Company, Inc., 35 S. William St., New York 4, N.Y.**

THE *New* BABBIN

Thermostatic Mixing Valve

3/4" — 2"



This new and improved BABBIN Valve brings fully dependable thermostatic hot water regulation to the small and large home field. It is adaptable for use on storage tanks, submerged tanks and tank saver units.

- All Bronze Casting . . . "ADNIC" Corrosion-Resistant Thermostatic Unit
- Positive Hot and Cold Water Shut-off • Temperature Range from 70° to 180° F. Only one moving part.

Get complete details. Write today.

EXPANDING TYPE SOLID LIQUID FILLED PATENTS
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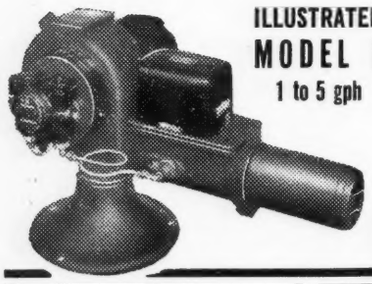
Babbin N.Y.C. THERMOSTATIC CONTROLS

258-60 Canal St. New York

One of the *OLDEST BURNERS* ...one of the *FINEST!*



ILLUSTRATED
MODEL L
1 to 5 gph

U. S. oil burners offer much more in performance and fuel economy—for much less in proportionate cost.
One of the oldest manufacturers of oil burners, if not *the* oldest, U. S. has kept abreast or ahead of the times in burner design and mechanical engineering.
3 models are available, 1 to 5 gph, 4 to 8 gph and 7 to 16 gph . . . a range to cover almost any heating specification.

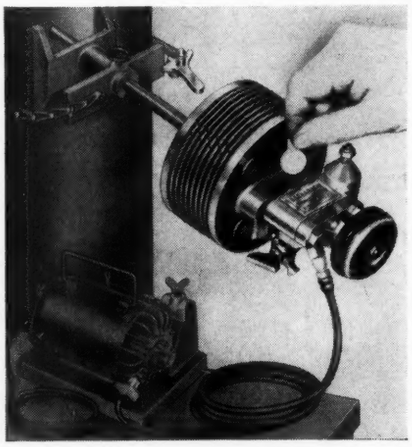
Write, wire or phone for detailed information.

UNITED STATES BURNER CORP., HARTFORD, CONN.

metal to withstand sustained vibration. Further, all are sealed against dust and moisture and each is calibrated to a master unit to insure accuracy.

Bacharach Introduces Oilburner Smoke Meter

A PORTABLE METER for smoke tests on oilburners, recently introduced by Bacharach Industrial Instrument Co., Pittsburgh, Pa., consists of a sampling unit, vacuum suction pump, comparator scale and test discs, all packed in a metal carrying case. For testing the smoke content of flue gases, a sampling tube is inserted into the flue pipe through a 7/16" hole, located between the furnace outlet and draft control, and the sampling unit tightened against the pipe by means of a pipe saddle with clamp.



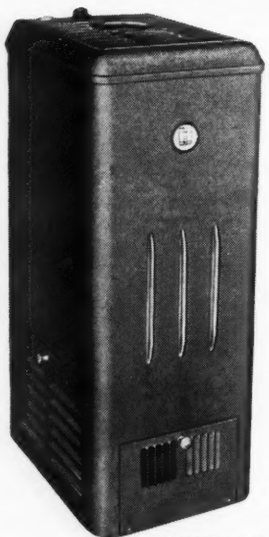
A test disc is locked in the sampling unit and the time control switch is thrown. This action operates the pump and draws a controlled sample of the flue gas through the test disc. When the test has been completed, the disc is removed and the soot content of the gas sample is measured by registering the discoloration of the test disc with one of ten shadings on the comparator scale.

Small Jobs; BIG PROFITS!

For Good Dealers With the

HILTON Silent Oil Burner

(10,000 Sold in 1947)



Compact—
Easily Installed
Easy to Sell.
22,000 B.T.U. Max.
Excellent, Low-Cost for
Trailers,
Small Houses,
"Hard-to-Heat Rooms"
and
Many Small Heating
Installations.

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HILTON PRODUCTS CO.

3128 E. Colorado St. Pasadena 6, Calif.

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NOW is the TIME to "CLEAN-UP"

with a

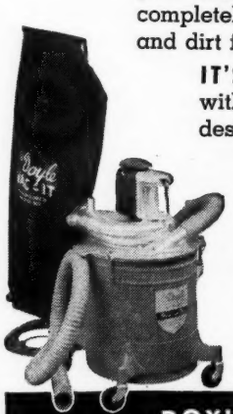
GRAND RAPIDS FURNACE CLEANER

Act Now! **Get in on this year's cleaning profits.** *Order a Grand Rapids Furnace Cleaner.*

IT'S FAST— Handles twice as many jobs as the ordinary furnace cleaner.

IT'S THOROUGH — High velocity suction completely removes ashes, soot, scale and dirt from every type of heating plant.

IT'S COMPLETE — A packaged unit with practical cleaning attachments designed for fast, easy cleaning.



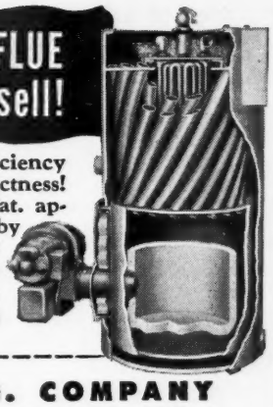
IT'S PROFITABLE—The trouble-free operation and speedy service of the Grand Rapids Furnace Cleaner puts extra profits in your pockets.

Send today for complete information about the Grand Rapids Furnace Cleaner.

DOYLE VACUUM CLEANER CO.

233 Stevens St., S.W. Grand Rapids 7, Michigan

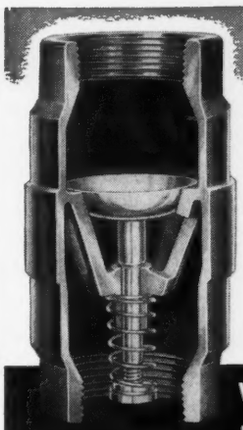
EXCLUSIVE SPIRAL FLUE gives you more to sell!



Here's "horizontal" boiler efficiency with "vertical" boiler compactness! The exclusive Spiral Flue (Pat. applied for) is offered only by EVEREDY and OILTRONIC Burner-Boiler Units. Capacities up to 1,043,000 BTU.

CONVERSION OIL BURNERS 0.65 to 20 G.P.H.

MT. HAWLEY MFG. COMPANY
MT. HAWLEY AIRPORT PEORIA, ILLINOIS



Strataflo

MONEL METAL POPPET CHECK VALVES

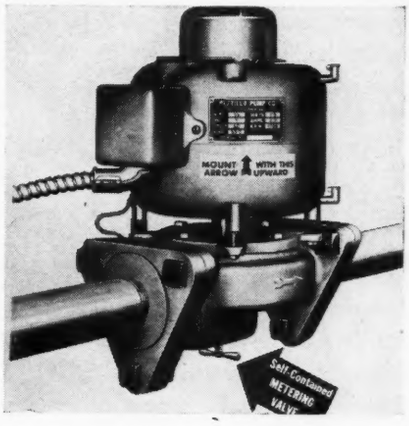
IDEAL for oil or air lines. Noiseless. End leakage troubles. Not affected by oil or acid impurities in oil. Sizes, 3/8" to 2". May be placed in any position. Write for bulletin No. 601.

No. 400

WHITE MACHINE WORKS
Order from Your Jobber FORT WAYNE 1, INDIANA

New Pezzillo Circulator Contains Metering Valve

ADJUSTAFLO model hot water circulator, announced by Pezzillo Pump Co., Inc., Philadelphia 32, Pa., features a self-contained metering valve for controlling the volume of water to be pumped through a hot water heating system. Adjustment of the valve permits circulation of a controlled volume of selected temperature water and provides for correlation between the Btu output of the boiler unit and the Btu output of the radiation.



Adjustaflo is offered also as a solution to difficulties caused by rapid changes in boiler temperature. Complete system shutoff, without valves, is possible.

As companion equipment to the new circulator, an Adjustaflo valve is offered for balancing branch circuits. The new pump is furnished in 110 volt, 60 cycle A.C. and 220 volt, 50 cycle A.C.

Two Sizes Offered Of P & K Water Circulators

TWO MODELS of water circulators, offered by Persson & Kellison, Seattle 8, Wash.,

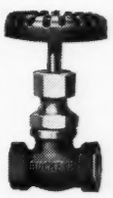
From tank to oil burner... ACCESSORIES by Buckeye

As one of the foremost names in the oil industry, "Buckeye" on your equipment signifies the ability of the equipment to *do* the job it was made to do . . . and to do it efficiently, economically and with a minimum of maintenance. These fittings, like the rest of the Buckeye complete line, live up to this reputation.

No. 4061 Angle Shut-off Valve
Needed on every line for emergency. Full capacity when wide open.

No. 4060 Globe Strainer
Sturdily and carefully made to clean oil before it enters the burner. Easily cleaned.

No. 4012 Angle Strainer
Widely used to eliminate impurities in the oil as it goes into the burner. Easily cleaned.

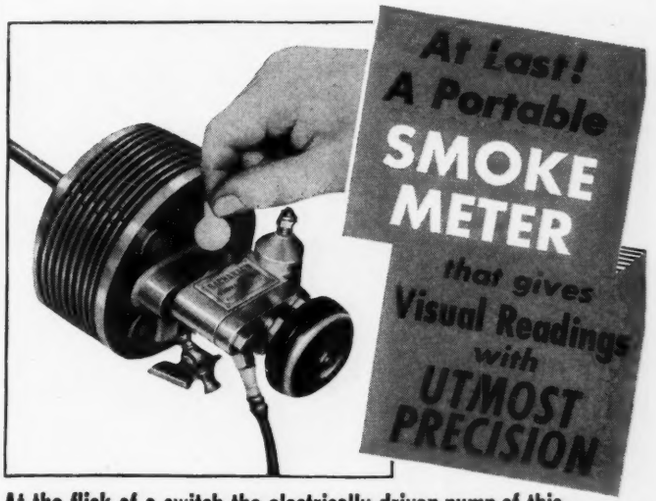


No. 4062 Globe Shut-off Valve
To close line for burner repair or replacement. Built for long life.

No. 79 and No. 444 Swing Check Valves
Disc lifts out of line of flow while pump operates.

Buckeye also manufactures Fill Caps, Fill Boxes, Sludge Pumps, Vents, Foot Valves and Bushings.

BUCKEYE IRON & BRASS WORKS, Dept. F
P. O. Box 883, Dayton 1, Ohio



At the flick of a switch the electrically-driven pump of this scientifically-designed smoke meter draws an accurately-controlled sample of combustion gases from the flue pipe, and automatically makes a "soot record" on a paper test disc.

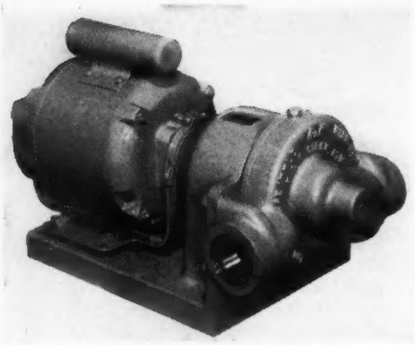
These test discs can be filed as positive and permanent records of test results.

The soot content of the gas sample as recorded on the test disc is measured against an ingenious "scale of soots" which is furnished with the instrument. This scale breaks down the full range of permissible smoke conditions of residential oil heating units into ten numbers.

For utmost portability the complete outfit, consisting of sampling unit, suction pump, "scale of soots," and 100 test discs, is securely packed in a handsome metal carrying case measuring 15" x 9" x 6".

Write for descriptive Leaflet 746 today.

BACHARACH Industrial Instrument Company
7000 Bennett Street • Pittsburgh 8, Pa.



have delivery rates of 42 and 48 gpm with 3½ ft. head. Model C-125 accommodates pipe sizes of 1¼"; C-15, 1½", each being powered with a 1/6 hp. motor.

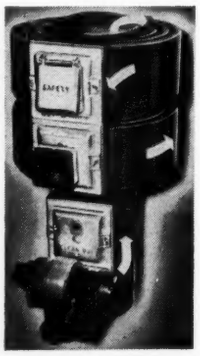
The pump can be mounted vertically or horizontally and features a rubber-mounted motor and graphitar bearing, requiring no lubrication. A precision machined cast bronze case and impeller are features of the unit, whose stainless steel shaft is mechanically sealed.

Ruby Management Adds Models to Furnace Line

SUPPLEMENTING its line of Williams oil-fired winter air conditioning units, reviewed on page 124, April issue, Ruby Management Co., Pittsburgh 26, Pa., announces that there are now available models for basement installation ranging in output from 65,000 to 210,000 Btu. Utility units can be furnished with capacities as low as 65,000 and as high as 125,000 Btu. There has been added also a line of gravity furnaces with input ratings from 75,000 to 150,000 Btu.

Four Sizes Developed By Radiation Furnace

SCHEDULED for early production, Radiation Furnace Corp., Benton Harbor, Mich., has announced four sizes of furnaces, developing bonnet capacities of 85,000, 110,000, 150,000 and 200,000 Btu/hr. All units feature double section heat exchangers, and, in order of capacity, will have one, two, three or four circular flues on each section of the radiator. Units are also equipped with cleanouts, a safety blowout, repair openings and special precast refractory combustion chamber, which can be replaced easily in the field. Standard equipment includes a high pressure gun burner, combination controls, blower, motor, filters, humidifier, draft control.



Hot gases rise to the top of the combustion chamber, first circulate through the upper section of the heat exchanger and then overflow into the lower section, passing completely through the lower section before entering the chimney.

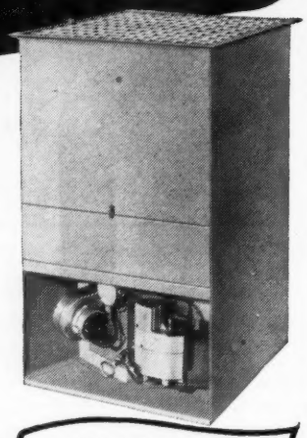
Lovejoy Repair Kit For Servicing Couplings

A THIRTY-TWO PIECE KIT, developed by Lovejoy Flexible Coupling Co., Chicago 44, Ill., has been designed to enable service men to repair couplings on any standard oilburner. It includes two splined hub adapters to fit shafts from 5/16" to ⅜" and permits adjustments for distances from 1⅝" to 5½" between drive and driven units. The container is of steel, with baked on crackle finish and there is space on the inside lid for dealer imprint.

MORE PROFITABLE BECAUSE IT'S A

Package Unit

FLOOR FURNACE



ONLY DOMESTIC OFFERS ALL THESE ADVANTAGES

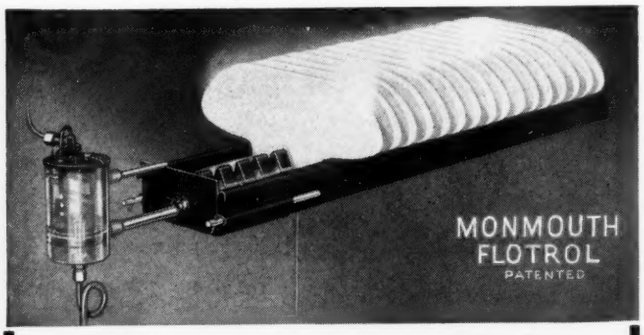
Domestic's oil-burning floor furnace comes *ready to install.* All controls are permanently located and electrically wired *at the factory.* Three simple connections: Oil line, smokestack, and electricity. "Backed by 14 years experience." Competitively priced. Attractive discount basis.

★ ★ ★

KEY SPECIFICATIONS: 50,000 BTU/HR output; register, metal-plated with statuary bronze; casing 24" wide, 24" deep, 43" high. Listed with Underwriter Laboratories. Write for more complete details.

HERE NOW!
Domestic's Conversion Burner with ½ c.c. pilot.

DOMESTIC COMPANY
2922 WESTERN AVENUE • SEATTLE 1, WASH.



MONMOUTH HUMIDIFIERS

Humidifiers are a popular item with home owners right now—more and more people recognize that proper humidification is essential to healthful heating. For top performance and long dependable service, use Monmouth Flotrol or Micro-Feed models.

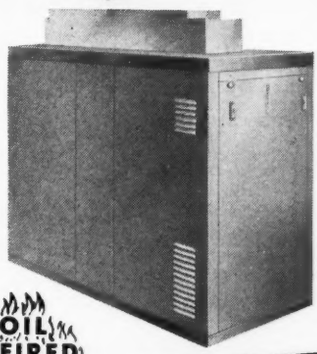
All Monmouth Humidifiers are now equipped with brand new design plates, improved in efficiency and durability. We also make gas-operated Humidity Conditioners for all radiator jobs. Details on request.

THE CLEVELAND HUMIDIFIER CO.
7808 Wade Park Ave., Cleveland 3, Ohio.

ARE YOU **LOOKING** FOR A SURE-FIRE SALES BUILDER?

. . . offer your trade the *Kaustine* "COMPLETE PACKAGE" heating unit for next winter's Heating Comfort . . . then watch your sales soar!

Kaustine 100% automatic Dual-Tank Winter Air Conditioning Units are "Sales-Engineered" with a flexible price range that enables you to compete in the widest possible market.



★1500 to 4000 Gallon 3/16" Underground Tanks are also available — Install them this summer—sufficient storage capacity for 1948-1949 Heating Season.

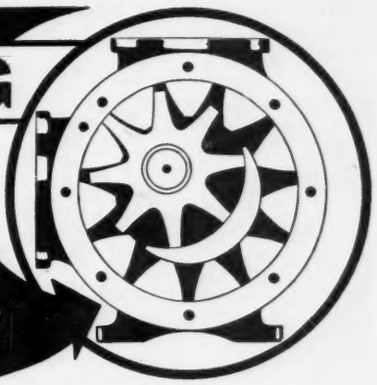
OIL FIRED

"Kaustine" for Larger Markets and Greater Profits!

Designed and Manufactured by
KAUSTINE COMPANY, INC.
PERRY, NEW YORK

VIKING

The DESIGN That Made ROTARY PUMPS FAMOUS!



It is with pride and a sense of great responsibility, that Viking has pioneered a pattern for the rotary pump field.

The pace, set by Viking for more than a third of a century, has stood this test of time.

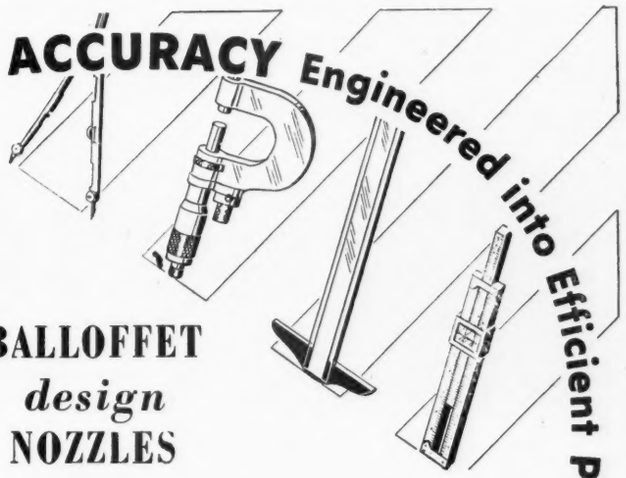
When you are in need of pumps, it will pay you to do as others have done, consider the original "gear within a gear" Viking first. You will find a decided difference.

Look to Viking for the answer to your pumping problem. Send for free bulletin 1500EE today. It will be forwarded at once.

See Our Catalog In SWEETS

Viking PUMP COMPANY
Cedar Falls, Iowa

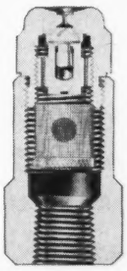
ACCURACY Engineered into Efficient Performance



BALLOFFET *design* **NOZZLES**

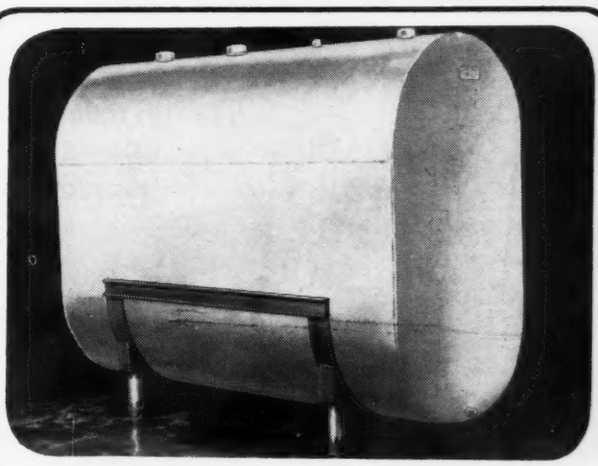
Precision-built to high standards in design and construction, their scientific accuracy is reflected in providing a finer, more uniform atomization. Comparative fire-tests will prove their superiority . . . reasons why they are used as standard equipment by leading burner manufacturers.

Literature upon request



BALLOFFET
Dies & Nozzle Co., Inc.
Guttenberg, N. J.

Manufacturer:
DELAVAN
ENGINEERING CO.
Des Moines 9, Iowa



Basement Fuel Oil Tanks

- Tank Weight 103 lbs.
- Cradle Weight 39 lbs.
- 10 Gauge .109 35½ hard.
- Shipping Weight 210 lbs. crated.

ALUMINUM 275 GAL. CAPACITY
Approved by Underwriters Laboratories, Inc.

Built like a pressure tank. All lap welds — will not corrode or rust. 30% stronger than 10-gauge steel.

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Write for details on how a QUALITY Burner and close factory Cooperation make a REXOIL Franchise profitable for You.

REIF-REXOIL, Inc.,
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SINCE
1922

Manufacturers of Rexoil Conversion Burners, Boiler Units, Furnace Units and Direct-Fired Conditioners

STANDARD WATER TUBE BOILERS

A MODERN HEATING PLANT FOR BETTER HOMES!

designed for ECONOMY of OPERATION
DEPENDABILITY and
EFFICIENCY

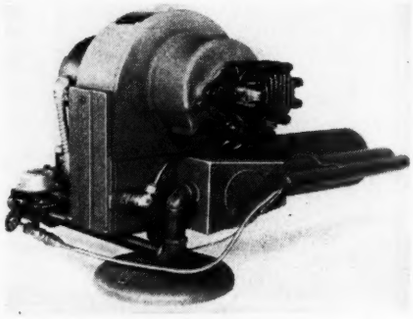
Write for BULLETIN No. 108

Standard Heater & Oil Equipment Co.
245 CORNELISON AVENUE, JERSEY CITY 2, NEW JERSEY

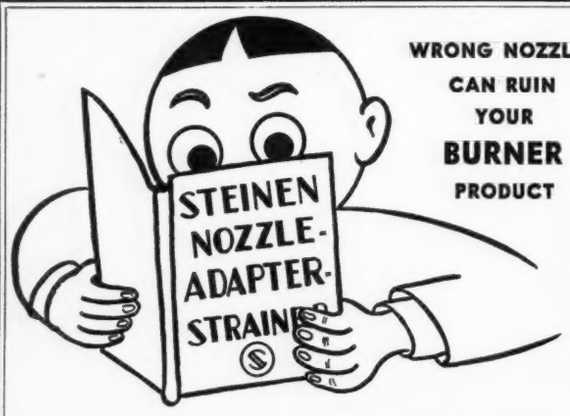
Couplings in the kit use neoprene cushion material to resist corrosive action of fueloil, while retaining the vibration dampening qualities of rubber.

Quiet Automatic Develops Combination Burner

TO PROVIDE interchangability of fuels, Quiet Automatic Burner Corp., Newark, N. J., has developed the Dual Heat burner, combining a conventional oilburner with gas burners. The gas component uses either artificial or natural gas, the oilburner operates on regular



No. 2 fueloil. Capacities are stated as 3 gph for oilburner operation, 400,000 Btu/hr. maximum gas input.



WRONG NOZZLES CAN RUIN YOUR BURNER PRODUCT

NOZZLES

What's Behind This Trade Mark

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STRAINER

ADAPTER

Why it's so important to everyone who uses STEINEN products because it means better burner performance.

Dependable year in, year out. Backed by 40 years experience in the manufacturing of engineered products for some of the leading manufacturers in the country.

WM. STEINEN MFG. CO.
Newark 5, N. J.

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Automatically Yours For Better Temperature Control

GENERAL CONTROLS
801 ALLEN AVENUE GLENDALE 1, CALIF.

FACTORY BRANCHES: BIRMINGHAM (3) BOSTON (16) CHICAGO (5) CLEVELAND (15) DALLAS (2) DENVER (10) DETROIT (8) HOUSTON (2) KANSAS CITY (2) NEW YORK (7) PHILADELPHIA (40) PITTSBURGH (22) SAN FRANCISCO (7) SEATTLE (1) • DISTRIBUTORS IN PRINCIPAL CITIES

MANUFACTURERS OF AUTOMATIC PRESSURE, TEMPERATURE & FLOW CONTROLS

WRITE FOR FREE DESCRIPTIVE LITERATURE

SAVE TIME—SAVE TOOLS—SAVE TEMPER—

WITH TASGON

Tasgon, the fastest and most penetrating rust solvent on the market, loosens frozen nuts, bolts, couplings, unions with almost magic ease . . . dissolves gummed-up oil, tar, paint, sludge . . . cleans and lubricates contact surfaces and tools — saves valuable, hard-to-replace equipment — saves exasperating delays — speeds jobs to completion!

Write today for free sample of Tasgon and complete information.

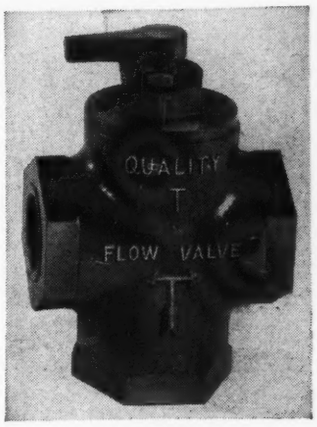
Samuel Cabot, Inc.

2275 OLIVER BUILDING, BOSTON 9, MASS.

Quality Two Directional T-Flow Control Valve

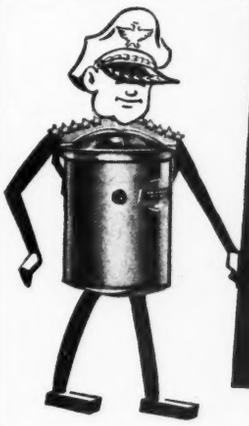
A TWO-DIRECTIONAL T-flow control valve for hot water circulating systems has been announced by Quality Specialty Co., Inc., Philadelphia, Pa. The valve permits radiation loads to be balanced, reduces friction and speeds up circulation. It fits pipe sizes 1" to 2" and incorporates a ½" outlet for expansion tank connection.

Manual or automatic operation is possible with the valve, which is available also for copper pipe installations. A cast-iron body and internal parts precision tooled for accurate seating are features.



B & W High Strength Chrome Base Concrete

KROMECAST, a high strength, chrome base refractory concrete, developed by Babcock & Wilcox Co., New York 6, N. Y., is designed to withstand temperatures as high as 3100° F. and can be poured into place, applied by plastering or with a cement gun. The cement provides protection against attack by fuel slags, metallurgical and chemical slags



ARE YOU MISSING A GOOD DEAL?

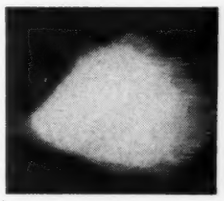
General Filters thinks you are if you don't install a General Filter for every one of your fuel oil burner customers. It's a "good deal" for the customer since it greatly aids in eliminating troubles due to clogged nozzles and it's a profitable service item for you. If you haven't already done so, investigate by writing to your jobber or directly to us.

GENERAL FUEL OIL FILTER

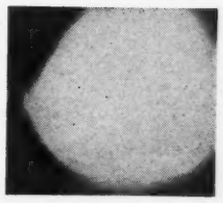
12890 WESTWOOD AVE.
DETROIT 23, MICHIGAN

Hollow Flame

SAVES 30% ON ANY BURNER



COMMON FLAME



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AIRFLAME, the only Hollow Flame Replacement Head, saves more fuel yet costs less than any other.

Oil Burners, Boiler Burner Units.

Eventrol Control Systems.

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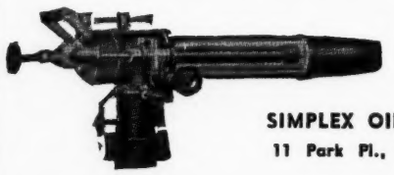


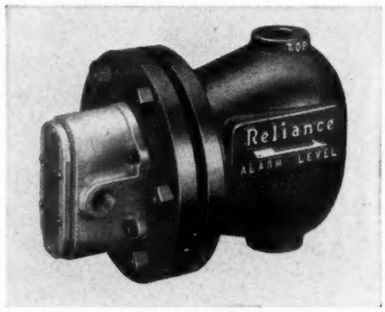
RESULTS COUNT!

SIMPLEX OIL HEATING CORP.
11 Park Pl., New York 7, N. Y.

and makes a chrome base refractory available for applications where such a material cannot now be used. Kromecast also can be used to construct vertical walls and roof arches in furnaces.

Liquid Level Alarm For Small Boilers, Tanks

A DEVICE to set off warning bells, sirens or lights when liquid levels in small boilers or various types of tanks reach predetermined low or high levels has been announced by Reliance Gauge Column Co., Cleveland, Ohio. Levalarm controls can be used on pressures up to 250 lbs.,



and contain an electric switch, operated by a permanent type magnet when a monel float rises or falls.

The switch can be wired for normally open or normally closed circuit, is dust, vapor and explosion proof.

Pipe Joint Compound In Jumbo and Regular Sizes

PIPETITE-STIKS, offered by Lake Chemical Co., Chicago, Ill., now are available in jumbo, as well as regular sizes. The larger size, individually wrapped in tinfoil, is a companion to the regular size introduced two years ago. Both sizes are used by rubbing several strokes of the stick across pipe threads. The compound spreads and fills the threads when pipe is tightened.

the ONLY Ignition Transformer with a 2 YEAR Guarantee

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ELECTRIC PRODUCTS CORP.

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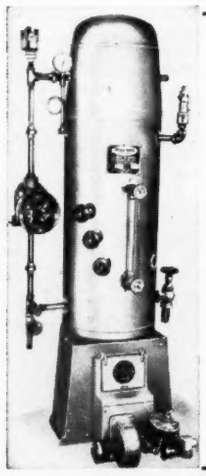

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AUTOMATIC STEAM GENERATORS

100 lbs. Working Pressure, A.S.M.E. Approved
From one to 100 Horsepower

Complete with or without low water cutoff and pump controls, condensation system. Packaged ready to install with complete instructions.

Suitable for Tailor Pressing Machines, Laundries, Dry Cleaners, Chemical Plants, Food Processing, and many other applications where high pressure steam is required.

Wholesale Distributors of
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CUSTOM BUILT
OIL BURNERS
for all domestic applications

SINCE 1892 SPECIALISTS IN FINE MOTORS & GENERATORS
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FUEL-SAVING STEEL BOILERS
A.S.M.E. built, Hartford inspected, S.B.I. rated

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STEEL BOILERS
Since 1886

The ultimate in economical heat and domestic hot water . . . for any size installation . . . for oil burner, gas burner, stoker, hand firing. Ask your local Fitzgibbons engineer, or write us.

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HEATING · PROCESS · POWER
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Fitzgibbons Boiler Company, Inc. 101 PARK AVE. NEW YORK 17, N. Y.

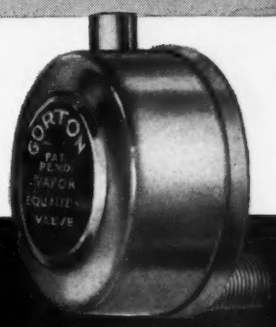
GORTON *Gives Guaranteed* EVEN HEAT DISTRIBUTION

WINS SATISFIED CUSTOMERS . . .

The Gorton System of Vaporizing and Equalizing existing steam heating systems for automatic heating provides quick automatic equal distribution of heat to every room . . . The flow of heat is automatically controlled so that all rooms receive equal distribution of heat.

NO PIPING CHANGES REQUIRED . . . GETS RID OF THE COLD ROOM PROBLEM

GET THE FACTS . . . WRITE TODAY! . . . FOR BULLETIN NO. 115D



GORTON HEATING CORP.

Manufacturers of High Grade Heating Equipment Since 1887

CRANFORD NEW JERSEY

Oilheating Trends

(*Continued from page 11*)

installations of all types. An interesting check on this is seen in the first four months' sales. In normal times, these four months represent an average of 19.7% of a year's business. If this year should follow that seasonal pattern, total installations would run about 476,000, including, of course, replacements.

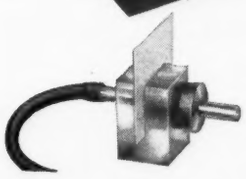
FUELOIL ALLOCATIONS: By the end of April 36% of the reporting fueloil distributors had been given no limitation nor allocation by their suppliers for next season. Nearly half, or 47%, had been told that their supply for next season would be the same as during the past season. The remaining 17% were told that they will have definite percentage increases, ranging all the way from 5% to 20%, and averaging 10%. In view of the known facts on the fueloil outlook it is obvious that as the season advances, and the suppliers feel more secure in their position, most of those distributors who have not yet been given increases, will get them. Obviously, not all will get increases, since some major companies are tighter than others, and some parts of the country have the more acute problems. The most favorable sections of the country at present appear to be the Midwest where 24% of the distributors have been given stated increases and the Mid-Atlantic area where 23% were told that they would have more oil. In New England, only 5% of the reporting distributors have been given definite assurance of more oil.

SELLING TANKS: During April approximately 14,083 customer storage tanks were sold to increase the capacity

WATCH YOUR SMOKE!

with

DWYER TRANSPARENT SMOKE GAGE



KNOW what your burner or furnace is doing—BE SURE you are getting the maximum amount of CO_2 with clean combustion. The DWYER Smoke Gage gives you an actual sample of smoke for comparison with the DWYER Smoke Chart. For greater fuel saving efficiency with soot-free burning, it's the DWYER Smoke Gage . . . . precision-made, accurate, inexpensive!

HOW TO USE IT: With Smoke Gage terminal tube in smoke pipe opening, force smoke sample through paper in Gage holder with aspirator bulb. Remove paper and compare with Chart. It's that easy!

DWYER No. 910 Smoke Gage . . $8.50 Complete

(DWYER 910-S Smoke Gage, for use with DWYER Combustion Test Set, no duplication of parts . . . . $4.50)

Write for literature describing the complete line of DWYER Test Instruments—Manometers, Draft Gages, etc.

F. W. Dwyer Mfg. Co.

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Write for our fully detailed bulletin . . . find out all the facts on FEDERAL'S Advanced Engineering Features that will mean easier selling for you!

FEDERAL BOILER CO., INC.
Granite & West Sts., Midland Park, N. J.
Gentlemen:
Please send me Bulletin No. 122.
Name .....
Address .....

FEDERAL BOILER CO. INC. FBC

GRANITE & WEST STS., MIDLAND PARK, N. J.

Representatives in Principal Cities

SEE THE NEW #20 TRANSFORMER

√20% Smaller
√20% Lighter
COSTS 10% LESS

Manufactured only by NEWARK—another NTC first

NEWARK TRANSFORMER CO.
LINDEN, NEW JERSEY

SAVES 20% ON FUEL

Richfield's amazing new Turbulator Head. For details write:

Richfield OIL BURNERS

315 Fifth Avenue
New York 16, N.Y.

of existing installations. This number in one month shows that the idea is gaining rapidly since the total such sales in the first three months had been 15,223.

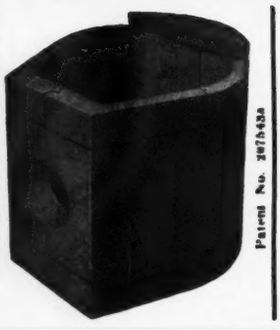
Size Characteristics of Tanks Sold

Size	*Number*
275 gal.	9,636
550	959
1,000	3,139
1,500	131
2,000	44
3,000	174

Adding an extra 275-gallon tank continues by far the most popular procedure, obviously because of its low cost. It is interesting to notice again this months that if folks are going outside for a buried tank, the 1,000-gallon size is more popular than the 550, since they cost relatively little more in most areas.

DEALER COMMENTS: Typical of the dealer comments of the month are these: "Our oil supplier will know more after June 1." . . . "Most people are too upset to take a chance on changing over to oil . . . something must be done to clear up this mess." . . . "The oil situation is still critical with us; last month our supplier promised a ten per cent increase; however he has now reverted back to the same as last year." . . . "Gas is available only in suburbs but new home buyers are insisting on automatic heat." . . . "Washington politicians indicate some effort will be made to restore rationing . . . Help! Help!" . . . "Only one major will accept new contracts in Detroit." . . . "Oilburner inquiries are picking up but money is less plentiful." . . . "Major oil companies are selling fueloil here at prices with which independents cannot compete . . . just the same old squeeze play." . . . "We are taking no new oil

truly TIME-TESTED



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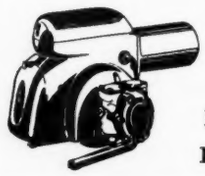
A COMPLETELY PACKAGED UNIT DESIGNED TO SATISFY THE INSTALLATION MAN.

WRITE FOR PROFIT-MAKING DETAILS AND SPECIFICATIONS

Monogram Products Co.
PHILADELPHIA 4, PA.

Build
REPLACEMENT SALES
With
The Oil-Thrifty



HERCO

HERCO OIL BURNER CORP.
LANCASTER, PENNSYLVANIA

Yula
MIXING VALVE

The Yula Mixing Valve perfectly tempers hot water to a predetermined temperature for domestic use at lowest cost.

It "tops" them all.

Write to Dept. F6

Yula
WATER HEATERS, INC.
166 WEST 225 ST. • NEW YORK 63

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PREFERRED
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Write for literature and trade price

The Original. Still the Best. Hundreds of Thousands in Use. • Holds the draft constant in the fire box. • Scientific draft control for the smallest to the largest jobs. • Stove, domestic, and commercial sizes from 4" to 24" in diameter. • Industrial sizes from 24" x 24" to 5' x 12'.

PREFERRED UTILITIES Mfg. Corp.
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Sundstrand OIL BURNERS

WRITE US FOR COMPLETE INFORMATION

FOR
- CLEAN
- QUIET
- ECONOMICAL
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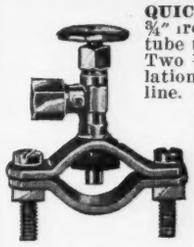
SUNDSTRAND ENGINEERING CO.
ROCKFORD, ILLINOIS

SADDLE VALVES



No. 8 Saddle Valve

QUICK HOOK-UP SADDLE VALVE for ½" and ¾" iron pipe—machined brass forging with insert tube to fit ¼" hole and with brass wheel handle. Two ¼" bolts and leather washer for easy installation. To attach merely drill ¼" hole in supply line. Conforms to city ordinances.

NEEDLE VALVE—For controlling water supply to humidifiers and feed valves. Made of corrosive-resisting brass ⅛" iron pipe male end, and ¼" O. D. copper tube on outlet.

No. 6 Needle Valve

PROMPT DELIVERIES — See your jobber, or write us!

MAID-O'-MIST, Inc. 3221 N. Pulaski Rd. Chicago 41, Ill.

accounts unless we install the burners." . . . "Oil is poor and dirty and too high per gallon." . . . "Our supplier cut our May quota 50%, so how cen we sell additional storage when we cannot get enough to fill the old amount?" . . . "Statement of encouragement on the oil situation by the majors would help a lot." . . . "We are conducting an extensive phone campaign with discouraging results; two factors are responsible in this order: fear of supply; price of fuel-oil; installation costs to a lesser degree." . . . "We cut our sales last year fifty per cent on burners and expect to sell the same amount this year." . . . "People in our section are not buying oilheating equipment primarily because of the excessive cost of oil over gas and coal." . . . "We anticipate very little burner business this summer unless the gas company is granted its application for a 70% increase in rates." . . . "There should be price control before next winter so that the fueloil dealer can stay in business." . . . "Speaking of replacements, all things being equal economy helps the sale, but in the home economy alone has little appeal; where there is trouble with the existing burner then economy appeals can induce replacement sales." . . . "Labor by demanding more pay for less work is cutting heavily into our chance for profits."

◈

James R. Butler and *Frederick J. Blume* have been appointed western and eastern regional sales promotion managers, respectively, by Rheem Mfg. Co., New York. Both have had previous sales experience.

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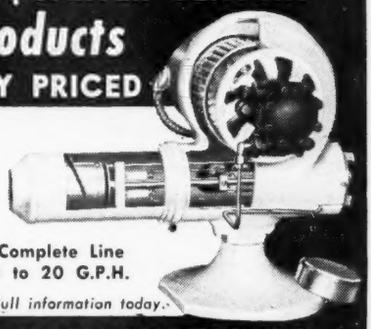
Quality Products
COMPETITIVELY PRICED



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A Complete Line .75 to 20 G.P.H.

Write for full information today.

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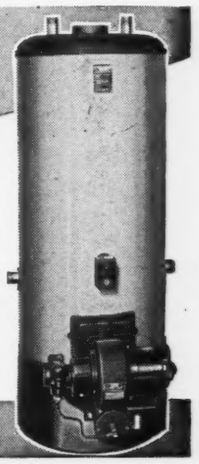
470 First Avenue West ROSELLE, NEW JERSEY

Bock OIL BURNING WATER HEATERS



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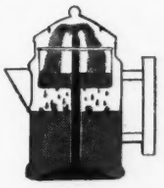
Bock CORPORATION
MADISON, WISCONSIN

PERCOFLASH the flash-action BOILER

The amazing operating efficiency of the PERCOFLASH Boiler is found in its unique percolating principle of design. Water is flashed into steam in all heads with exceptional rapidity and efficiency. Geyser tubes raise water to steam heads eliminating the necessity of raising all water in boiler to steaming temperature. This means faster and more economical generation of steam. It's a fuel saver whether coal, gas or oil.

When you think of Percolating action, think of PERCO-FLASH!



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Write for Franchise Plan!

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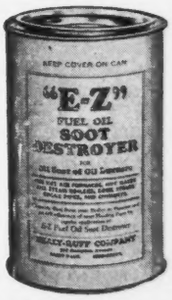
120 S. LaSalle, Chicago

E-Z SUMMER CLEAN UPS

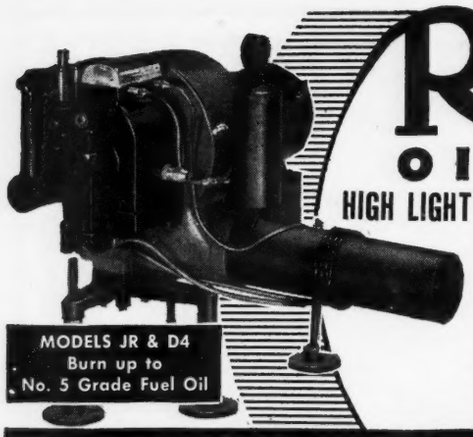
E-Z Fuel Oil Soot Destroyer will clean many thousands of oil-fired furnaces this Summer. Its speed (one application does the job), its thoroughness in eliminating all soot, its safety and low cost per job, make E-Z a big profit item. (Good for fuel oil soot only.) Keep a 5 lb. Can in each service truck, always. Stock the 1 lb. Can for direct sale to customers. If your Distributor cannot supply you, order direct.



No. 1 Pkg. approx. 1 lb. . . . List $1.00 ea.
No. 5 Pkg. approx. 5 lbs. . . List $4.50 ea.

Special discount to Distributors on quantity purchases, allows for extending regular discount to Dealers and Servicemen.

HEALY-RUFF COMPANY
797 Hampden Avenue • St. Paul 4, Minnesota



MODELS JR & D4
Burn up to
No. 5 Grade Fuel Oil

RAYFIELD
AUTOMATIC
OIL BURNERS

HIGH LIGHT OIL PRICES MAKE GOLDEN OPPORTUNITY

Cash in on conversion and replacement jobs now by installing Rayfield burners for No. 5 oil and make profits for yourself and savings for your customers.

Model JR for 2,000 to 8,000 Gals. yearly
Model D4 for 5,000 to 20,000 Gals. yearly

Investigate comparative oil prices in your locality now and figure it out for yourself—it will amaze you.

MODEL L-3
For Fuel Oil-
up to No. 3 Grade

C. L. RAYFIELD CO., 2010-18 S. Halsted St., Chicago 8, Ill.

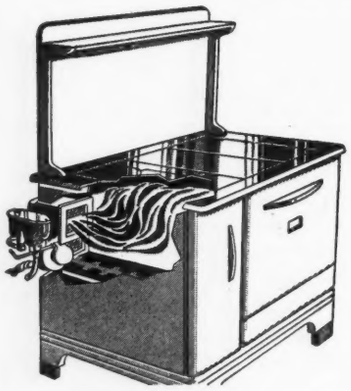
Profits!

Through the

SUPER-THERM

Combination

OIL BURNER



SALES prospects for this modernizing, easily installed oil burner are *all* owners of gas, wood and coal stoves and ranges. Super-Therm fits any size stove, front or rear —will last a lifetime—will not soot or smoke—has automatic safety features. Write now for details and *dealer profit* facts.

THERM OIL BURNER CO.

Pioneers of the Oil Burning Industry

2105A Westlake Avenue

SEATTLE 1, WASHINGTON

DEGREE DAY TABLES

ONE MONTH ONLY					SEASON TO DATE			
	April		Percent		(Sept. 1 to Apr. 30)			Percent
Normal	1947	1948	Change*		Normal	1947	1948	Change*
549	650	543	— 1.1	Albany	6366	6250	7108	+ 11.7
173	76	75	— 56.7	Atlanta	2967	2879	2811	— 5.3
347	302	308	— 11.2	Baltimore	4410	4021	4389	— 0.5
538	537	511	— 5.0	Boston	5605	5129	5849	+ 4.4
672	650	487	— 27.5	Buffalo	6454	6074	6315	— 2.2
536	546	396	— 26.1	Chicago	5946	5910	5982	+ 0.6
374	294	224	— 40.1	Cincinnati	4861	4768	4481	— 7.8
558	547	398	— 28.7	Cleveland	5839	5569	5782	— 1.0
95	95	32	— 66.3	Dallas	2364	2464	2689	+ 13.7
523	552	355	— 32.1	Denver	5513	5602	5331	— 3.3
449	493	306	— 31.8	Des Moines	6191	6182	6195	+ 0.1
569	609	426	— 25.1	Detroit	6250	5928	6224	— 0.4
575	584	422	— 26.6	Grand Rapids	6392	5986	6169	— 3.5
525	557	515	— 1.9	Hartford	5821	5536	6324	+ 8.6
643	622	653	+ 1.6	Helena	7191	7545	7461	+ 3.8
38	33	8	— 79.0	Houston	1321	1489	1557	+ 17.9
414	392	309	— 25.4	Indianapolis	5304	5211	5240	— 1.2
327	342	149	— 54.4	Kansas City	4865	4742	4883	+ 0.4
158	128	171	+ 8.2	Los Angeles	1258	1268	1407	+ 11.8
302	242	213	— 29.5	Louisville	4329	4140	4285	— 1.0
621	665	494	— 20.5	Milwaukee	6615	6696	6813	+ 3.0
580	685	454	— 21.7	Minneapolis	7643	7529	7780	+ 1.8
32	30	32	..	New Orleans	1207	1380	1626	+ 34.7
467	453	449	— 3.9	New York	5094	4617	5158	+ 1.3
414	495	263	— 36.5	Omaha	5922	5928	6094	+ 2.9
378	354	380	+ 0.5	Philadelphia	4605	4528	4789	+ 4.0
448	357	298	+ 33.5	Pittsburgh	5257	5084	5250	— 0.1
668	711	707	+ 5.8	Portland, Me.	6753	6703	7205	+ 6.7
370	291	462	+ 24.9	Portland, Ore.	3973	4052	3951	— 0.6
543	509	461	— 15.1	Providence	5701	5092	6140	+ 7.7
305	287	204	— 33.1	St. Louis	4514	4535	4687	+ 3.8
450	494	421	— 6.5	Salt Lake City	5335	5588	5548	+ 4.0
269	224	343	+ 27.5	San Francisco	2317	2740	2573	+ 11.0
829	956	749	— 9.7	Sault Ste. Marie	8416	8269	8372	— 0.5
440	331	518	+ 18.0	Seattle	4256	4254	4373	+ 2.7
534	577	406	— 24.0	Toledo	5976	5874	6192	— 3.6
345	255	265	— 23.2	Washington	4478	3915	4281	— 4.4

*Compared with normal.